



Royal College of
Obstetricians
and Gynaecologists



UK Obstetric Surveillance System



40

NEWSLETTER 40 - January 2015

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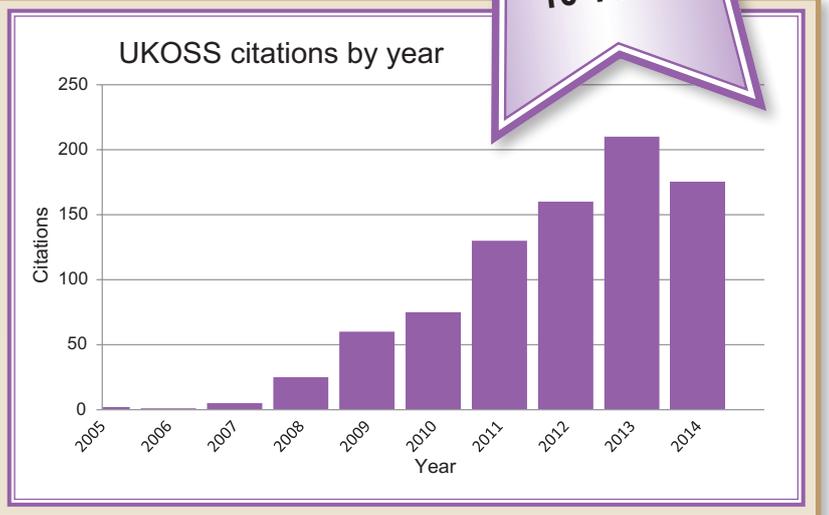
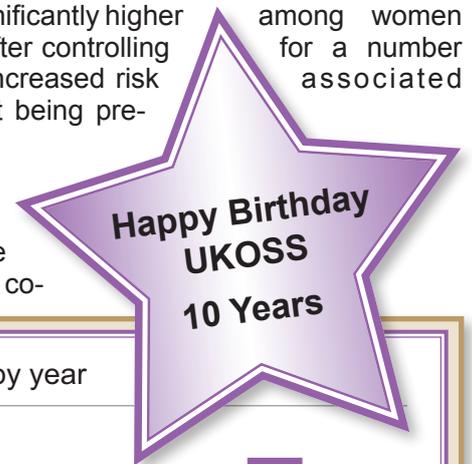
Factors associated with maternal Death from Direct Pregnancy Complications: A UK National Case-control Study.

A previous study showed that the risk of maternal mortality in the UK was higher among pregnant women who were obese, older than 35 years, and belonged to unemployed or manual socioeconomic groups and black Caribbean and African ethnic backgrounds. However, due to limited data on women who died, a detailed investigation of factors potentially underlying the association between these maternal characteristics and risk of mortality could not be undertaken. The aim of the current study was to further investigate the potential role of factors such as medical comorbidities, substance misuse, inadequate antenatal care and problems during current and previous pregnancies in the progression from severe morbidity to death due to direct pregnancy complications among women in the UK. An unmatched case-control analysis was undertaken using more detailed data on maternal deaths from the latest confidential enquiries into maternal deaths in the UK (MBRRACE-UK) and data on women who survived severe life-threatening complications from the UK Obstetric Surveillance System (UKOSS).

Six factors were found to be independently associated with maternal death from direct pregnancy complications. The odds of inadequate utilisation of antenatal care (adjusted odds ratio (aOR)=15.87, 95% CI=6.73-37.41), substance misuse (aOR=10.16, 95% CI=1.81-57.04), medical comorbidities (aOR=4.82, 95% CI=3.14-7.40), previous pregnancy problems (aOR=2.21, 95% CI=1.34-3.62), hypertensive disorders of pregnancy (aOR=2.44, 95% CI=1.31-4.52) and belonging to Indian ethnicity (aOR=2.70, 95% CI=1.14-6.43) were significantly higher among women who died compared to women who survived severe obstetric complications after controlling for a number of other risk factors. On a population basis, 70% (95% CI= 66-73%) of the increased risk associated with maternal death could be attributed to these factors, the most important being pre-existing medical conditions (49%; 95% CI = 41-56%).

While deaths due to indirect medical causes outnumber maternal deaths due to direct obstetric causes in the UK, this study identified medical co-morbidities to be importantly associated with direct maternal deaths. This suggests the need for optimal pre-pregnancy and pregnancy care for women with medical co-morbidities and further studies to understand the specific aspects of care that could be improved to reduce deaths among pregnant women with medical co-morbidities in the UK.

Reference: Nair, M., Kurinczuk, JJ., Brocklehurst, P., Sellers, S., Lewis, G. & Knight, M. 2014. Factors associated with maternal death from direct pregnancy complications: a UK national case-control study. BJOG, DOI: 10.1111/1471-0528.13279.



We would love to hear how you have used UKOSS data over the past 10 years. Please email us at UKOSS@npeu.ox.ac.uk

THIS MONTH

- New Pulmonary Embolism study starting soon
- Meet the Cardiac Arrest Study Lead



Thanks to the following hospitals who have returned cards for the last three months
(August, September, October 2014):

Aberdeen Maternity Hospital, Aberdeen
Airedale General Hospital, Keighley
Alexandra Hospital, Redditch
Altnagelvin Area Hospital, Londonderry
Antrim Hospital, Antrim
Arowe Park Hospital, Wirral
Ayrshire Maternity Unit, Kilmarnock
Bassetlaw District General Hospital, Worksop
Bedford Hospital, Bedford
Birmingham City Hospital, Birmingham
Birmingham Women's Hospital, Birmingham
Borders General Hospital, Borders
Bradford Royal Infirmary, Bradford
Bronglais Hospital, Aberystwyth
Broomfield Hospital, Chelmsford
Caithness General Hospital, Wick
Calderdale Royal Hospital, Halifax
Causeway Hospital, Coleraine
City Hospitals Sunderland NHS Trust, Sunderland
Countess of Chester Hospital, Chester
Craigavon Area Hospital, Portadown
Croydon University Hospital, Thornton Heath
Cumberland Infirmary, Carlisle
Daisy Hill Hospital, Newry
Darent Valley Hospital, Dartford
Darlington Memorial Hospital, Darlington
Derby Hospitals NHS Foundation Trust, Derby
Dewsbury and District Hospital, Dewsbury
Diana Princess of Wales Hospital, Grimsby
Doncaster Royal Infirmary, Doncaster
Dorset County Hospital, Dorchester
Dr Gray's Hospital, Elgin
Dumfries & Galloway Royal Infirmary, Dumfries
Ealing Hospital NHS Trust, London
East Sussex Healthcare NHS Trust,
St Leonards-on-Sea
Epsom General Hospital, Epsom
Forth Valley Royal Hospital, Larbert
Frimley Park Hospital, Camberley
Furness General Hospital, Barrow-in-Furness
George Eliot Hospital, Nuneaton
Gloucestershire Royal Hospital, Gloucester
Good Hope Hospital, Sutton Coldfield
Harrogate District Hospital, Harrogate
Hereford County Hospital, Hereford
Hinchingbrooke Hospital NHS Trust, Huntingdon
Homerton University Hospital, London
Horton Maternity Hospital, Banbury
Hull Royal Infirmary, Hull
Ipswich Hospital, Ipswich
James Cook University Hospital, Middlesbrough
James Paget University Hospitals Trust, Great
Yarmouth
Jersey General Hospital, St Helier
John Radcliffe Hospital, Oxford
King's Mill Hospital, Sutton in Ashfield
Leeds General Infirmary, Leeds
Leighton Hospital, Crewe
Lister Hospital, Stevenage
Liverpool Women's Hospital, Liverpool
Macclesfield District General Hospital,
Macclesfield
Milton Keynes Hospital NHS Foundation Trust,
Milton Keynes
New Cross Hospital, Wolverhampton
Newham General Hospital, London
Ninewells Hospital & Medical School, Dundee
Nobles Hospital, Douglas
Norfolk & Norwich University Hospital, Norwich
North Devon District Hospital, Barnstaple
North Manchester General Hospital, Manchester
Northampton General Hospital, Northampton
Nottingham City Hospital, Nottingham
Peterborough City Hospital, Peterborough
Pilgrim Hospital, Boston

Prince Charles Hospital, Methyr Tydfil
Princess Alexandra Hospital, Harlow
Princess Anne Hospital, Southampton
Princess Elizabeth Hospital, St Martins
Princess of Wales Hospital, Bridgend
Princess Royal Hospital, Haywards Heath
Princess Royal University Hospital, Orpington
Queen Charlotte's and Chelsea Hospital, London
Queen Elizabeth Hospital, Kings Lynn
Queen Elizabeth the Queen Mother Hospital,
Margate
Queen's Hospital, Burton upon Trent
Queen's Hospital, Romford
Raigmore Hospital, Inverness
Rotherham District General Hospital, Rotherham
Royal Albert Edward Infirmary, Wigan
Royal Berkshire Hospital, Reading
Royal Bolton Hospital, Bolton
Royal Cornwall Hospital, Truro
Royal Devon & Exeter Hospital, Exeter
Royal Glamorgan Hospital, Llantrisant
Royal Jubilee Maternity Service, Belfast
Royal Oldham Hospital, Oldham
Royal Preston Hospital, Preston
Royal Surrey County Hospital, Guildford
Royal Victoria Infirmary, Newcastle-upon-Tyne
Russells Hall Hospital, Dudley
Salisbury District Hospital, Salisbury
Scarborough Hospital, Scarborough
Simpson Centre for Reproductive Health,
Edinburgh
Singleton Hospital, Swansea
South Tyneside NHS Foundation Trust, South
Shields
South West Acute Hospital, Enniskillen
Southend University Hospital NHS FT,
Westcliff-on-Sea
Southern General Hospital, Glasgow
Southmead Hospital, Bristol
Southport & Ormskirk Hospital NHS Trust,
Ormskirk
St George's Hospital, London
St James's University Hospital, Leeds
St John's Hospital, Livingston
St Mary's Hospital, London
St Mary's Hospital, Newport
St Michael's Hospital, Bristol
St Peter's Hospital, Chertsey
St Richard's Hospital, Chichester
Staffordshire General Hospital, Stafford
Stepping Hill Hospital, Stockport
Stoke Mandeville Hospital, Aylesbury
Tameside General Hospital, Ashton-under-Lyne
Taunton and Somerset Hospital, Taunton
The Great Western Hospitals NHS Foundation
Trust, Swindon
The Jessop Wing, Sheffield
The Portland Hospital, London
The Tunbridge Wells Hospital, Tunbridge Wells
Torbay Hospital, Torquay
Ulster Hospital, Belfast
University College Hospital, London
University Hospital of Coventry & Warwickshire,
Coventry
University Hospital of North Durham, Durham
University Hospital of North Tees,
Stockton-on-Tees
University Hospital of Wales, Cardiff
Victoria Hospital, Blackpool
Victoria Hospital, Kirkcaldy
Wansbeck General Hospital, Ashington
Warrington and Malton Hospitals NHS FT,
Warrington
Warwick Hospital, Warwick
West Cumberland Hospital, Whitehaven

West Suffolk Hospital, Bury St Edmunds
West Wales General Hospital, Carmarthen
Western Isles Hospital, Stornoway
Wexham Park Hospital, Slough
Whipps Cross University Trust Hospital, London
Whiston Hospital, Prescot
Whittington Hospital, London
William Harvey Hospital, Ashford
Wishaw General Hospital, Wishaw
Worthing Hospital, Worthing
Wrexham Maelor Hospital, Wrexham
Wythenshawe Hospital, Manchester
York Hospital, York
Ysbyty Gwynedd District General Hospital,
Bangor
Basildon Hospital, Canvey Island
Barnet and Chase Farm NHS Trust Maternity
Unit, Barnet
Birmingham Heartlands Hospital, Birmingham
Chelsea & Westminster Hospital, London
Chesterfield & North Derbyshire Royal Hospital,
Chesterfield
Derriford Hospital, Plymouth
Kettering General Hospital, Kettering
King's College Hospital, London
Kingston Hospital, Kingston upon Thames
Lancashire Women and Newborn Centre, Burnley
Leicester Royal Infirmary, Leicester
Lincoln County Hospital, Lincoln
Manor Hospital, Walsall
Medway Maritime Hospital, Gillingham
Nevill Hall Hospital, Abergavenny
North Hampshire Hospital, Basingstoke
Northwick Park Hospital, Harrow
Pinderfields General Hospital, Wakefield
Poole Hospital, Poole
Princess Royal Maternity Hospital, Glasgow
Queen Elizabeth Hospital, Gateshead
Queen Elizabeth Hospital, London
Royal Free Hospital, London
Royal Gwent Hospital, Newport
Royal Hampshire County Hospital, Winchester
Royal Lancaster Infirmary, Lancaster
Royal Sussex County Hospital, Brighton
Scunthorpe General Hospital, Scunthorpe
St Mary's Hospital, Manchester
The Hillingdon Hospitals NHS Foundation Trust,
Uxbridge
University Hospital of North Staffordshire,
Stoke on Trent
Watford General Hospital, Watford
West Middlesex University Hospital, Isleworth
Yeovil Women's Hospital, Yeovil
Barnsley Hospital NHS Foundation Trust,
Barnsley
East Surrey Hospital, Redhill
Glan Clwyd District General Hospital,
Bodelwyddan
Guy's and St Thomas' Hospital, London
Leicester General Hospital, Leicester
Luton & Dunstable Hospital, Luton
North Middlesex University Hospital, Edmonton
Nottingham University Hospitals NHS Trust,
Nottingham
Queen Alexandra Hospital, Portsmouth
Rosie Maternity Hospital, Cambridge
Royal Alexandra Hospital, Paisley
Royal London Hospital, London
Royal United Hospital, Bath
St Helier Hospital, Carshalton
University Hospital Lewisham, London
Colchester General Hospital, Colchester
Royal Shrewsbury Hospital, Shrewsbury
Worcestershire Royal Hospital, Worcester

Returned all three cards. Returned two cards. Returned one card. No Cards Returned.



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New UKOSS study - Pulmonary Embolism

Background: Thromboembolic disease, including pulmonary embolism (PE) has been identified as the most important cause of direct maternal mortality in the UK, but can be difficult to diagnose. Pregnant and postpartum women with appropriately diagnosed and treated PE have a low risk of adverse outcomes, so accurate diagnosis can result in substantial benefits. However, the investigations used to diagnose PE (diagnostic imaging with VQ scanning or CT pulmonary angiography) carry risks of radiation exposure, reaction to contrast media and false positive diagnosis, are inconvenient for patients and incur costs for the health services. Clinicians therefore face a difficult choice when deciding how to investigate suspected PE in pregnant and postpartum women, between risking the potentially catastrophic consequences of missed diagnosis if imaging is withheld and risking iatrogenic harm to women without PE if imaging is over-used.

Objective: To use the UK Obstetric Surveillance System to identify all women with diagnosed pulmonary embolism (PE) in pregnancy and postpartum in the UK, and describe their characteristics and diagnostic investigations, and use this information in the wider (DiPEP) study estimating the diagnostic accuracy, effectiveness and cost-effectiveness of strategies for selecting pregnant or postpartum women with suspected PE for imaging.

Surveillance period: 1st March 2015 - 30th September 2016

Case Definition:

EITHER PE is confirmed using suitable imaging (angiography, computed tomography, echocardiography, magnetic resonance imaging or ventilation-perfusion scan) showing a high probability of PE

OR PE is confirmed at surgery or postmortem

OR a clinician has made a diagnosis of PE with signs and symptoms consistent with PE present, and the patient has received a course of anticoagulation therapy (>1 week)

Lead Investigator: Prof Steve Goodacre, Professor of Emergency Medicine, Medical Care Research Unit, University of Sheffield



Case report summary for current studies up until the end of November 2014

Disorder	Actual number of reported cases	Data collection forms returned (%)	Number of confirmed cases (%)	Expected number of confirmed cases
Adrenal Tumours	33	30 (91)	12 (40)	72
Advanced Maternal Age* (study ended 30/06/14)	350	306 (87)	217 (72)	300
Amniotic Fluid Embolism*	200	194 (97)	133 (69)	118
Anaphylaxis*	43	38 (88)	26 (68)	65
Artificial Heart Valves	68	58 (85)	45 (78)	119
Aspiration in Pregnancy*	5	5 (100)	1 (25)	19
Cardiac Arrest in Pregnancy* (study ended 30/06/14)	172	151 (88)	70 (46)	81
Epidural, Haematoma or Abscess	10	6 (60)	6 (100)	2
Gastric Bypass in Pregnancy	100	59 (59)	44 (76)	24
Primary ITP	163	129 (79)	90 (73)	137

Funding: * This study represents independent research funded by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research Programme (Programme Grant RP-PG-0608-10038)

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Meet the Cardiac Arrest in Pregnancy Study Lead – Virginia Beckett

Virginia Beckett is the Principal Investigator for the UKOSS Cardiac Arrest in Pregnancy Study, currently consultant Obstetrician & Gynaecologist at Bradford. Melanie O'Connor, UKOSS/UKNeS Programme Manager, interviews Virginia about her role as a UKOSS Study Lead.

MO: Where do you currently work and what is your job title?

VB: I work at Bradford Teaching Hospitals NHS Foundation Trust. I am a Consultant & Honorary Senior Lecturer in Obstetrics & Gynaecology and have special interests in Maternal & Reproductive Medicine

MO: Can you give a brief summary of your career so far?

VB: I qualified from University College London in 1991. My SHO jobs were in central London, then I was appointed to the St. George's Hospital registrar rotation. I moved to The Hammersmith & St Mary's Hospitals for Sub-specialty training in Reproductive Medicine as a flexible trainee. I transferred to the Yorkshire Deanery when my husband was appointed as a consultant and was appointed to a consultant post myself, in the same hospital, in 2003.

MO: When did you first become aware of UKOSS?

VB: From the beginning I think! We have a very well organised research team in Bradford and we were highly motivated to contribute to UKOSS.

MO: How did you find the UKOSS study application process?

VB: I found the UKOSS application process pretty straightforward. The committee were welcoming when I went to present my proposal and had helpful suggestions for the study and for the grant application process.

MO: Please could you summarise your experience working with UKOSS?

VB: I'd really recommend UKOSS as a method to obtain data. The team have been really supportive, from designing the questionnaire to presenting the data for publication.

MO: Where are you currently in the study process?

VB: We are analysing our data, writing abstracts and preparing papers for publication.

MO: Lastly, what advice would you give to those considering applying to UKOSS?

VB: My advice would be, if you have an idea, approach UKOSS. From a simple question that came to me in a MOET conference (how often do women have a cardiac arrest in the UK and how do we manage them), we are poised to publish some really interesting data.



Virginia Beckett -
Bradford Teaching Hospitals

Chocolate Box



Chocolates this month go to Nikki McNulty from University Hospital of Coventry & Warwickshire for accurate form completion and Dawn Apsee from Singleton Hospital, Swansea for timely return of monthly cards.

Many thanks to you both!



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