



Université Lille Nord de France
Pôle de Recherche
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Burden of disease related to stroke & outlook for the coming decade.



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Burden of stroke

- **Stroke: major public health issue**
 - **High incidence**
 - 2,400 strokes / year for 1 million inhabitants
 - **High case fatality rate**
 - **High risk of residual disability**
 - **Important direct and indirect costs**



Burden of stroke

- **Stroke: major public health issue**
 - **Many strokes are preventable**
 - Optimal management of risk factors
 - Antithrombotic therapies
 - Removal of a possible cause (e.g. : carotid surgery)



Burden of stroke

- **Stroke: major public health issue**
 - Many strokes are treatable

Population: 1 million inhabitants (2,400 strokes / year).
End-point: Death or dependency.

	Events prevented (1,000 pts treated)	Target population (%)	Events avoided /1M2
ASA	12	80%	23
rt-PA < 3h	143	10%	34
rt-PA 3-4.5h	71	20% (?)	34
Stroke Unit	50	100%	120
Hemicraniectomy	500	ε	ε



Burden of stroke

- **Stroke: major public health issue**
 - **Long-term risk of stroke**
 - Mortality
 - Handicap
 - Cognitive impairment / dementia
 - Behavioural changes
 - Recurrence
 - Occurrence of other types of vascular events



Burden of stroke

- **What is expected for the next years**
 - **Increase in incidence**
 - Increased survival after coronary events
 - Increased survival after stroke when adjusted on age
 - Ageing of EU population
 - **Stability in case-fatality rates**
 - Decreased case-fatality rate per age-category
 - *Improvement of acute care*
 - *Changes in case-mix over time*
 - Ageing of EU population



Burden of stroke

- **What is expected for the next years**
 - **Increased (cognitive) burden of “silent” vascular lesions of the brain (“tsunami of health care ...”).**
 - Silent infarcts
 - White matter changes
 - Microbleeds
 - Atrophy



Burden of stroke

- **The cost of underfunding stroke care**

Underfunding of Stroke Research: A Europe-Wide Problem

Sarah T. Pendlebury, Peter M. Rothwell, Ale Algra, Marie-José Ariesen, Goksel Bakac, Anna Czlonkowska, Alexandra Dachenhausen, Yakup Krespi, Janika Kõrv, Konrad Krolikowski, Sergey Kulesh, Patrik Michel, Lars Thomassen, Julien Bogousslavsky and Michael Brainin

Stroke 2004;35;2368-2371; originally published online Aug 12, 2004;

Conclusions—This study confirms that stroke research is grossly underfunded, compared with CHD and cancer, throughout Europe. Similar data have been obtained from the United States suggesting that relative underfunding of stroke research is likely to be a worldwide phenomenon. (*Stroke*. 2004;35:2368-2371.)



Burden of stroke

- The cost of underfunding stroke care

Relative No. of Grants, Expenditure in Euros, and No. of Posts Dedicated to Stroke Compared With CHD, Cancer, and to the Total for Each Country

Country	Stroke vs CHD			Stroke vs Cancer			Stroke vs Total		
	Grants	Spending Ratio	Posts	Grants	Spending Ratio	Posts	Grants	Spending Ratio	Posts
Austria	4/12	0.02		4/22	0.11		4/38	0.02	
Belarus	8/14	0.38		8/43	0.06		8/65	0.05	
Estonia	4/9	0.10		4/7	0.17		4/20	0.06	
Norway		0.11	4/39		0.02	4/190		0.02	4/233
Netherlands	11/23	0.16		11/9	0.02		11/41	0.02	
Switzerland		0.53			0.17			0.11	
Turkey	2/4	1.38		2/32	0.08		2/38	0.07	
United Kingdom		0.07	7/455		0.02	7/2160		0.02	7/2618
Poland	26/76	0.34		26/311	0.09		26/413	0.07	



Priorities for the next decade

Stroke Turns 40

Stroke: Working Toward a Prioritized World Agenda

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Priorities for the next decade

1. Basic science, drug development and technology
2. Stroke prevention
3. Acute Stroke management
4. Brain recovery and rehabilitation
5. Into the 21st century : web, technology, communication
6. Foster cooperation amongst stakeholders to enhance stroke care
7. Educate professionals, patients, public, and policy makers



CPD accreditation applied for by the
Royal College of Physicians.

SAVE THE DATE!

Stroke Conference

NEW FRONTIERS IN STROKE: MULTI-DISCIPLINARY ADVANCES ACROSS THE STROKE PATHWAY

10th June 2011, Congress Centre, London

Supported by:



Speakers and topics:

Professor Anthony Rudd

Professor of Stroke Medicine, Kings College London Consultant Stroke Physician, Guy's and St Thomas's Hospitals NHS Foundation Trust Clinical Director, Stroke London and Chair - Intercollegiate Stroke Working Party Royal College of Physicians
Delivering implementation of hyper-acute stroke units (HASUs)

Professor Keith Muir

SINAPSE Professor of Clinical Imaging & Consultant Neurologist Institute of Neurosciences & Psychology University of Glasgow
Extending the windows of effective stroke thrombolysis

Professor Iris Q. Grunwald

Professor of Neuroradiology at Saarland University, Germany, Apl. Consultant Radiologist and Neuroradiologist Oxford Radcliffe Hospitals NHS Trust and Lead of the Translational Stroke Project within the Biomedical Research Centre, University of Oxford.

New frontiers in neuro-imaging

Professor Lalit Kalra

Professor of Stroke Medicine Kings College Hospital NHS Foundation Trust
Pushing boundaries in neuro-regeneration

Professor Ross Naylor

Honorary Professor of Vascular Surgery & Consultant Vascular Surgeon University of Hospitals of Leicester NHS Trust
Safely delivering maximal benefit from carotid endarterectomy during the critical early period after a TIA or minor stroke

Dr. Adam Paul Fitzpatrick

Consultant Cardiologist Manchester Heart Centre
Atrial Fibrillation

Rebecca Fisher

CLAHRC Stroke Rehabilitation Fellow The University of Nottingham
Delivering early supported discharge in stroke

Dr Christopher McKevitt

Division of Health and Social Care Research Kings College London
Meeting the unmet need for long term care in stroke

Professor Caroline Watkins

Professor of Stroke & Older People's Care Academic Lead and Chair of UK Forum for Stroke Training
The UK Stroke Forum and the SSEF: signposting the way to workforce development