

Introduction to EuroScan

Professor Brendon Kearney
Chair
EuroScan International

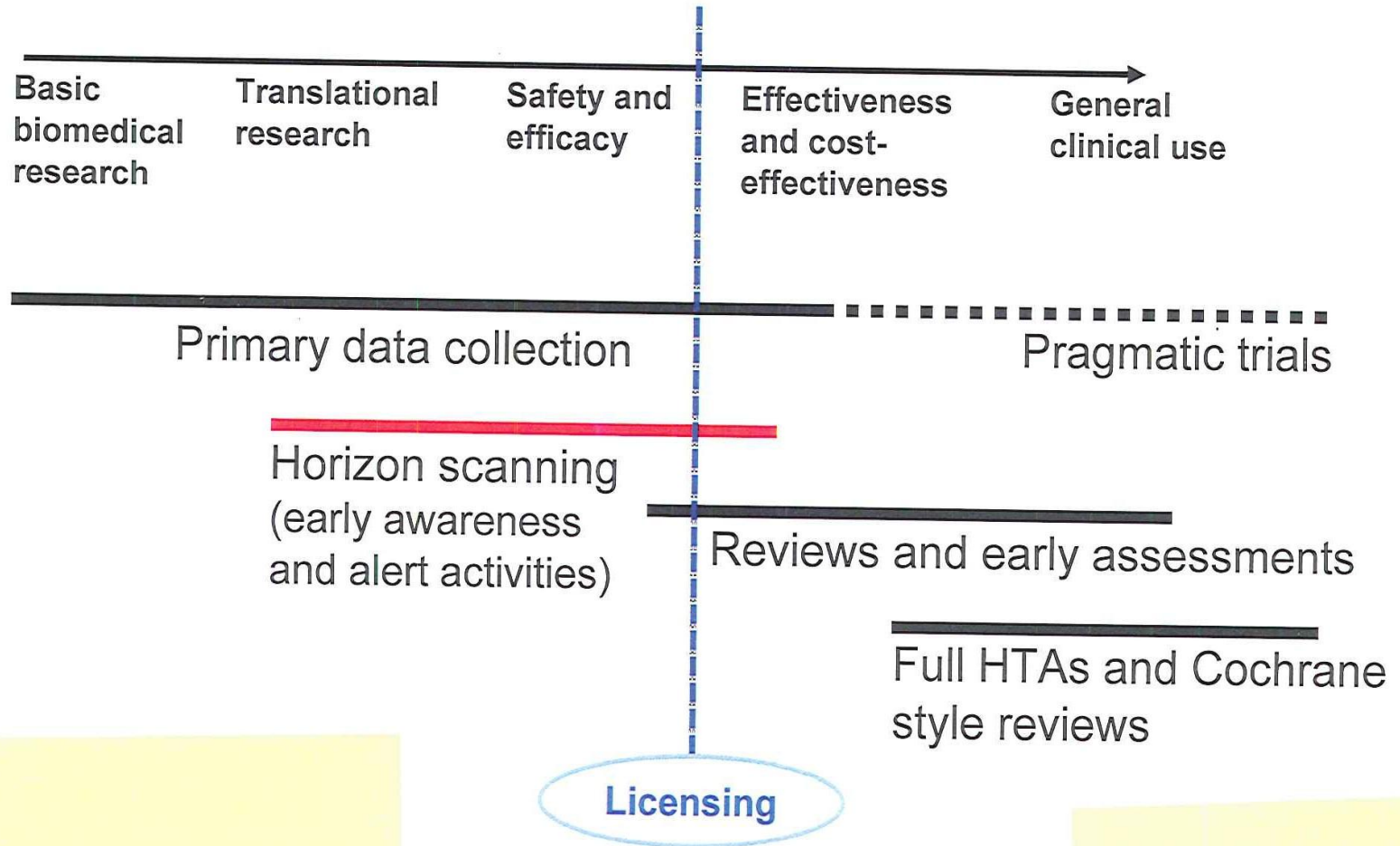




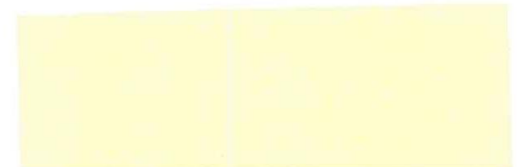
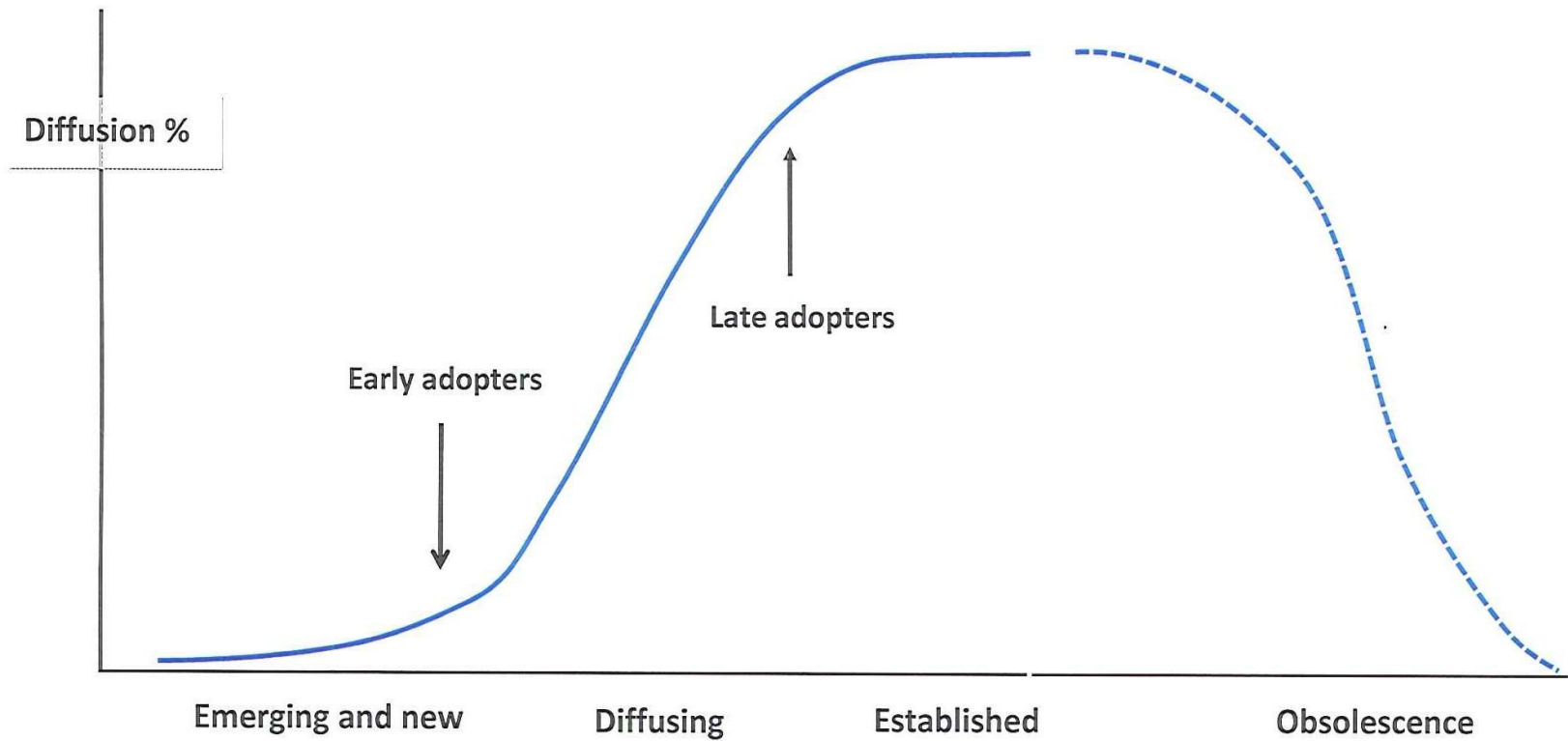
Life cycle of technology

- Future technology – technology not yet developed
- Emerging technology – technology prior to adoption
- New technology – technology in the phase of adoption
- Accepted technology – technology in general use
- Obsolete technology – technology that should be taken out of use

Horizon scanning and HTA



Adoption, diffusion and obsolescence



EuroScan

*The international information network on new
and emerging health technologies*



“A collaborative network of member agencies for the exchange of information on important emerging new drugs, devices, procedures, processes, and settings in health care”

EuroScan Mission

- EuroScan International Network is the leading global collaborative network that collects and shares information on innovative technologies in healthcare in order to support decision-making and the adoption and use of effective, useful and safe health-related technologies.
- EuroScan is also the principal global forum for the sharing and development of methods for the early identification and early assessment of new and emerging health-related technologies and predicting their potential impact on health services and existing technologies.
- EuroScan International Network is committed to work with a high level of transparency and professionalism, and in partnership with researchers, research centres, governments and international organisations to produce high quality information and effective early awareness and alert systems for our respective constituencies. We are also committed to support the development of existing and new not-for-profit public agencies working in the early awareness and alert field.

EuroScan Vision

- EuroScan International Network will form the leading global network for public institutions working on the identification and early assessment of new and emerging technologies in healthcare to support decision-making and the adoption and use of innovative technologies to the benefit of patients and health services.

EuroScan Goals

- To establish a system to share skills and experience in Early Awareness and Alert activities.
- To strengthen activities for the development of methodological approaches to the identification, description and assessment of emerging technologies.
- To improve the exchange of information about new and emerging health technologies and their potential impact on health services and existing health technologies.
- To increase the impact of EuroScan International Network's output.
- To identify relevant not-for-profit public partners in order to share the results of work with partners/members of the EuroScan International Network collaboration.
- To advise not-for-profit organisations within public administrations who wish to consider the establishment of early awareness and alert activities.

EuroScan Membership

EuroScan consists of representatives from agencies already undertaking substantial early awareness and alert activities who relate to their regional or national government.

Membership is open to any agency that:

- is developing, or has, a programme for the early identification and assessment of emerging, new or changing health technologies;
- has an ongoing, officially recognised role in relation to regional or national government;
- is a non-profit organisation;
- is at least 50 per cent funded from public sources;
- has no link, other than scientific, with commercial companies or R&D centres ;
- is transparent about their founding and financing in their membership application, and
- commits to support the EuroScan mission.

EuroScan Members (1)

- 18 members representing agencies in 14 different countries
- Members in 4 continents: Africa, Australia, Europe and North America



EuroScan Members (2)

- **AETS** - Agencia de Evaluación de Tecnologías Sanitarias. Instituto de Salud Carlos III, Spain
- **AETSA** - Agencia de Evaluación de Tecnologías Sanitarias de Andalucía, Spain
- **Agenas** – Agenzia nazionale per I servizi Sanitari Regionali, Italy
- **CADTH** - Canadian Agency for Drugs and Technologies in Health, Canada
- **CEDIT** - Committee for Evaluation & Diffusion of Innovative Technologies, France
- **DIMDI** - German Institute for Medical Documentation and Information, Germany
- **FINOHTA (MUMM)** - Managed Uptake of Medical Methods programme, Finnish Office for Health Technology Assessment, Finland
- **GR** - Health Council of the Netherlands, Netherlands
- **HPACT** - Health Policy Advisory Committee on Technology, Australia and New Zealand
- **H-SIGHT** – Horizon Scanning Centre for Innovative Global Health Technology, Korea
- **ICET** - Israeli Center for Emerging Technologies , Israel
- **IHSP** - Italian Horizon Scanning Project, Servizio Farmaceutico Territoriale, Italy
- **INESSS**- Institut national d'excellence en santé et en services sociaux, Canada
- **LBI-HTA** - Ludwig Boltzmann Institut für Health Technology Assessment, Austria
- **NIHR HSC** – National Institute for Health Research Horizon Scanning Centre, England
- **NOKC** - The Norwegian Knowledge Centre for the Health Services, Norway
- **OSTEBA** - Basque Office for Health Technology Assessment, Basque Country, Spain
- **SBU** - The Swedish Council on Technology Assessment in Health Care, Sweden
- **SFOPH** - Swiss Federal Office of Public Health, Switzerland

Publications

- EuroScan members have worked together to develop the methods used in EAA activities and investigate interesting aspects of emerging technologies resulting in a number of publications:
 - Gutierrez-Ibarluzea I, Simpson S, Benguria-Arrate G. Early awareness and alert systems: an overview of EuroScan methods. *International Journal of Technology Assessment in Health Care* 2012; 28(3): 301-7.
 - Packer C, Gutierrez-Ibarluzea I, Simpson S. The evolution of early awareness and alert methods and systems. *International Journal of Technology Assessment in Health Care* 2012; 28(3):199–200.
 - Simpson S, Packer C, Carlsson P, Sanders J, Gutiérrez Ibarluzea I, Fay A-F, Norderhaug I. Early identification and assessment of new and emerging health technologies: Actions, progress, and the future direction of an international collaboration – EuroScan. *International Journal of Technology Assessment in Health Care*; 24:4(2008), 518-525
 - Packer C, Simpson S, Stevens, A. International diffusion of new health technologies: a ten-country analysis of six health technologies. *International Journal of Technology Assessment in Health Care* 2006; 22(4): 419-428

Collaboration with other organisations

EuroScan is happy to collaborate with organisations with related activities in order to:

- Disseminate information on, and increase understanding of, early awareness and alert systems and activities
- Avoid duplication
- Share experiences, methods and outputs
- Promote the introduction and diffusion of safe, effective and cost effective health technologies in health systems around the world.

EuroScan International Network has signed Memorandum of Understandings with the International Network of Agencies for Health Technology Assessment (INAHTA), the World Health Organisation (WHO), Department of Essential Health Technologies and Health Technology Assessment International (HTAi)

EuroScan Structure

- EuroScan comprises Members, an Executive Committee and a Secretariat.
- The Executive Committee of EuroScan is made up of representatives from member agencies that, on a permanent basis, undertake substantial EAA activity. There is an elected Chair, Vice Chair, Registrar and a Treasurer.
- The current Executive Committee is shown in the table below. The Secretariat is currently based at the NIHR Horizon Scanning Centre

Position	Current Post Holder	End of term
Chair	Prof Brendon Kearney, HPACT	31/12/13
Vice Chair	Dr Marianne Klemp, NOKC	31/12/13
Registrar	Dr Roberta Joppi, IHSP	31/12/14
Treasurer	Dr Anna Nachtnebel, LBI-HTA	31/12/14
Head of Secretariat	Dr Claire Packer, NIHR HSC	n/a

EuroScan Outputs

- Terminology and Understanding of Early Awareness and Alert Activities
- Methods Toolkit
- Database of New and Emerging Technologies
- Website
- Newsletter
- Presentations & Publications

Database of New & Emerging Technologies

- Since June 2001 a web-based database of information with information on significant health technologies has been compiled by EuroScan members.
- The database now contains information on over 2000 technologies. Around 50% are pharmaceutical drugs.
- Current access to the EuroScan Data:

	Basic technology details (technology name, type of technology, patient indications, source agency)	Full record – publicly accessible	Full record – not publicly accessible	Ability to add technologies to database
Member	✓	✓	✓	✓
Non- member	✓	✓	x	x

Futures – futurology or forecasting

- Predicting and dealing with uncertainty
- Often long time horizon; 10-20 years
- Possible, probable, preferable and 'wild card' futures
- Challenge assumptions behind dominant and contending futures

24 methods listed including:

- Back-casting
- Delphi
- Driver analysis
- Gaming
- Horizon scanning
- Roadmaps
- Scenarios
- Systems mapping
- Trend analysis
- Visioning

Foresight, Government Office for Science

<http://hsctoolkit.tribalhosting.net/Horizon-scanning.html>

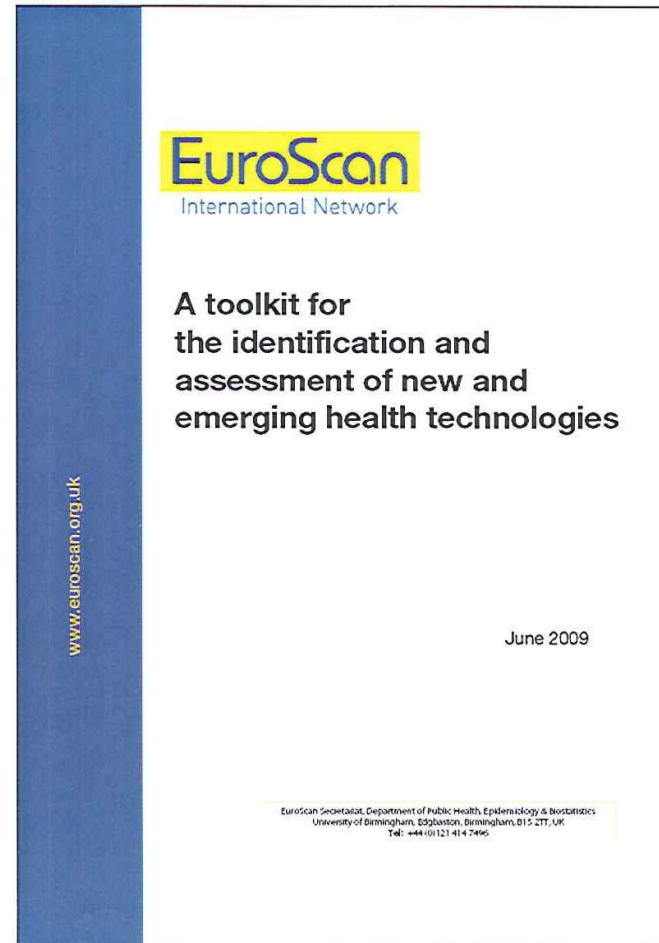
Futures – horizon scanning

- The systematic examination of potential threats, opportunities and likely developments including, but not restricted to, those at the margins of current thinking and planning.
- Horizon scanning may explore novel and unexpected issues as well as persistent problems or trends.

UK Office of Science and Innovation

Methods Toolkit

- Collaborative document covering all members approaches to EAA activities
- Sets out stages found in most EAA systems to:
 - Find
 - Select, and
 - Evaluate ... important emerging health technologies
- Incorporates a checklist
- Provides valuable information to those interested in establishing, or improving an existing, early awareness and alert system



Early awareness and alert system

A stable unit with reliable connections and sources which aims to:

- identify new and emerging health technologies (horizon scanning),
- filter and prioritise technologies most likely to have a significant future impact, and
- make an assessment of potential impact or clinical and cost effectiveness.

An EAA system and early assessments are an integral part of the health technology assessment (HTA) activities.

Who horizon scans?

Non-health

- 'UK' plc
- Police
- Defence services
- Treasury
- Financial services
 - Investors & competitors
- Charities – risks and conflicts
- Weather – risks
- Etc. etc.

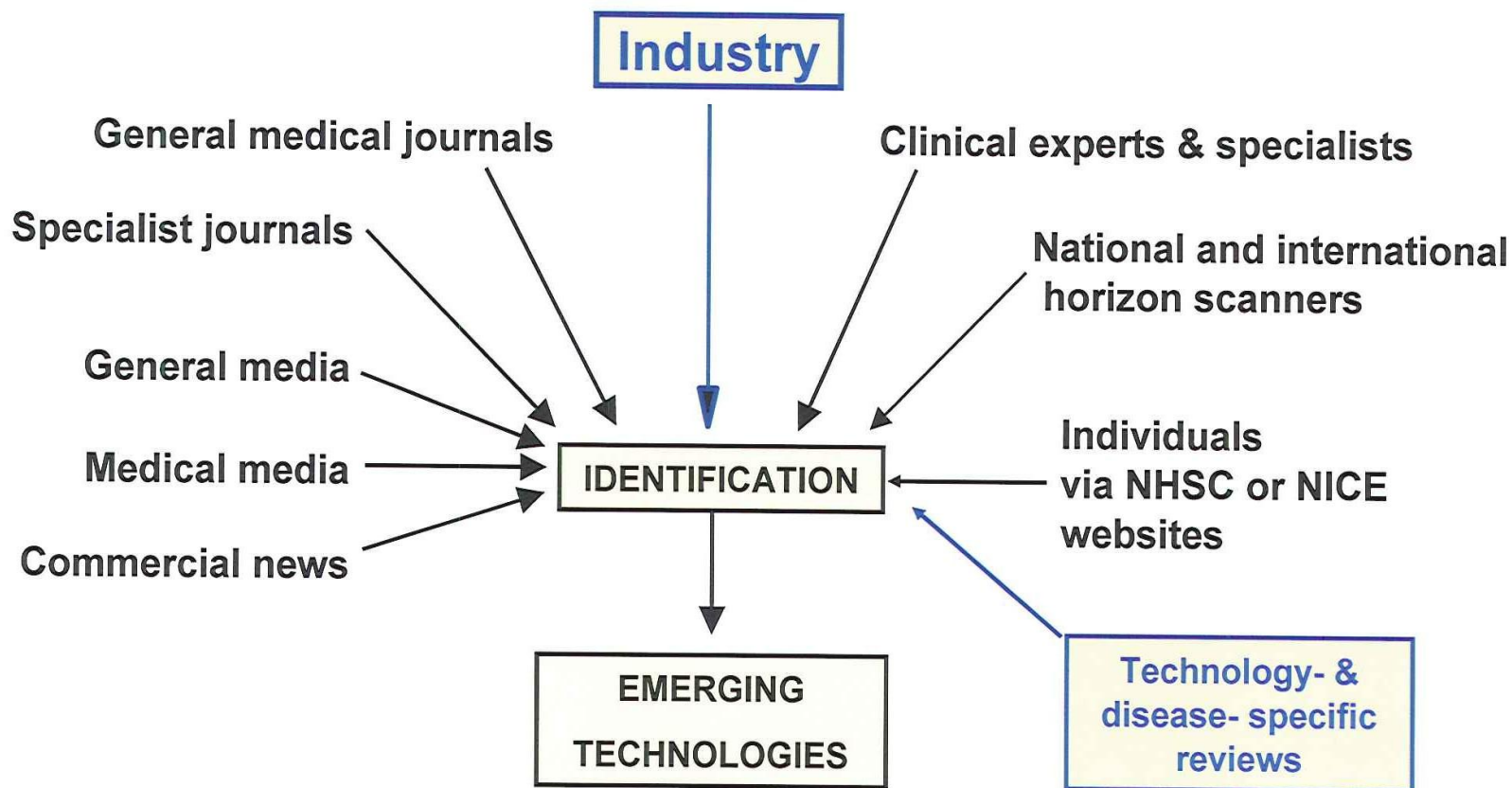
Health

- Infectious diseases
 - Animal & human
- Industry
 - Investors & competitors
- Service commissioners
- Insurance companies
- Service providers
- Health professionals
 - Procurement staff
 - Doctors
- Patients
- Research funders

Stage 3: Horizon scanning and early identification

- Horizon scanning is:
 - the systematic identification of new and emerging health technologies that have the potential to make an impact on health and/or health services.
- Identification can be:
 - proactive and/or reactive
- EAA system needs to determine which sources to scan:
 - Dependent on stages 1 & 2, and
 - Resources available
- System needs to be in place to handle the information gathered during identification

Methods: identification sources

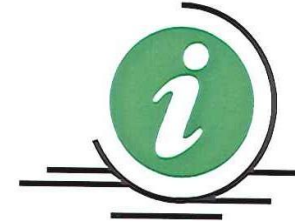


Identification



- Primary, secondary and tertiary sources
- Sources:
 - Health services, providers and patients
 - Company development pipelines
 - Internet, media and conferences
 - Regulators
 - Other EAA systems
- Collaboration in identification – networks, international
- Evaluation of sources – quality, coverage, pick-up rate
- Practicalities – timing, volume, missing information

Methods: investigation



- Company information
 - Licensing plans
 - Indications and patient groups
 - Purpose e.g. diagnosis, risk prediction, screening, monitoring
 - Trials and adverse events

- Limited internet search
 - Epidemiology and burden of disease
 - Available options, current practice, and UK guidelines
 - Research evidence and ongoing clinical trials

- Clinical view
 - Place in patient pathway
 - Potential concerns – patients, services and costs

Methods: filtration



- Pharmaceutical
 - Time to licensing
 - 24+ months for new drugs
 - 15+ months for new indications
 - Innovation - completely new; novel approach; incremental
 - or relates to major patient group where guidance has been issued
- MedTech
 - Time frame
 - CE marked now or expected within 6 months,
 - Launched within UK or expected within 12 months and/or
 - In research use in some UK centres
 - Innovation - completely new; novel approach; incremental
 - Potential for impact on patients and/or the NHS
 - Clinical – health outcomes; Resource – costs, service delivery, infra-structure
- Undertaken:
 - by the NHSC as information received from companies, and
 - in collaboration with NICE and National Specialised Commissioning teams (via filtration forms)

Methods: monitoring



- Drugs
 - Active on NHSC database ($\approx 2,150$ drugs)
 - Monitoring per month – check still in phase II trials (≈ 150)
 - Monitoring per month – contact company (≈ 50)
- Devices & diagnostics
 - Active on NHSC database (≈ 250)
 - Currently being investigated (≈ 25)
 - Monitoring per month – contact company (≈ 40)
- Other
 - Regenerative medicine including use of stem cells
 - Genomic tests and personalised medicines

EuroScan Website (euroscan.org.uk)

The screenshot shows the EuroScan International Network website. The browser address bar displays 'http://euroscan.org.uk'. The website header includes the EuroScan logo and navigation links: Home, About EuroScan, Membership, Members, Activities, Methods, Outputs, News, Contact, and Links. A login section for 'MEMBERS LOGIN' is visible with fields for 'Username:' and 'Password:'. The main content area is divided into several sections:

- About EuroScan:** A yellow box containing the text: 'The International Information Network on New and Emerging Health Technologies (EuroScan International Network) is a collaborative network of member agencies for the exchange of information on important emerging new drugs, devices, procedures, programmes, and settings in health care.' A 'More Info' link is provided.
- Subscribe to general RSS Feed:** A small icon and text.
- EuroScan Secretariat:** Contact information: 'NIHR Horizon Scanning Centre, Tel: +44 (0)121 414 7856, Email: j.hamilton@ohsm.ac.uk'.
- Technology Search:** A search bar with 'Search EuroScan' and a 'SEARCH' button, with a link to 'Advanced search'.
- View the Members List:** A link with a right-pointing arrow and a world map icon.
- Recently Added Health Technologies:** A list of three items:
 - ExAblate Neuro MR guided focused ultrasound for neurological conditions:** Source agency: NIHR-HSC, Date of Submission: 28/02/2013, View More.
 - Abraxane in combination with gemcitabine for metastatic pancreatic cancer – first line:** Source agency: NIHR-HSC, Date of Submission: 11/02/2013, View More.
 - Erlotinib (Tarceva) for the adjuvant treatment of EGFR positive non-small cell lung cancer:** Source agency: NIHR-HSC, Date of Submission: 11/02/2013, View More.
- Second generation transcatheter aortic valve replacement (TAVR) prostheses:** Source agency: NIHR-HSC.
- Recent News:** A list of three news items:
 - EuroScan Newsletter Issue 13 Now Available:** 21st December 2012, Read More.
 - WHO launches Call for Innovative Health Technologies for Low Resource Settings:** 21st December 2012, Read More.
 - Cleveland Clinic Names Top 10 Innovations for 2013:** 22nd November 2012, Read More.
- Recent Newsletters:** A list of links: 'Electronic Newsletter 13', 'Electronic Newsletter 12', 'Electronic Newsletter 11', and 'Past newsletters'.
- Sign up receive news updates:** A form with 'Add your email address' and a 'SIGN UP' button.

EuroScan Newsletters

- Bi-annual
- Contributions from members on:
 - EAA systems,
 - EAA activities and methods, and
 - Emerging health technologies
- News from collaborating organisations
- Related news stories

EuroScan Newsletter  **December 2012 Number 13**

Web: <http://www.euroscan.org.uk>

In this edition

- Member Profiles
 - Institut national d'information en santé et en services sociaux (INESSS)
- Horizon Scanning
 - Second Generation Transcatheter Aortic Valve Replacement (TAVR) Devices
 - Personalised the ages and in vivo comparison diagnostic tests for melanoma
- Methods and Evaluation
 - Impact evaluation of "Horizon Scanning in Oncology"
 - Providing evidence and recommendations to renew the benefit package of the Basque Health System
 - Evolution of the Italian EAA system through the R2HTA network
 - Horizon scanning and burden of disease: Does innovation in healthcare reflect need?
- Collaboration
 - NTA
 - WHO Call for Innovative Technologies
 - ADHOPTA

A note from the editor

Welcome to issue 13 of the EuroScan newsletter. In this bumper issue you can read about the work of eight EuroScan member agencies, with articles on emerging health technologies, methods employed by agencies and their networks: an evaluation of an early awareness and alert system and research utilizing the EuroScan database of emerging technologies. There is also an overview of the views of other organisations on recent important technological developments and predictions for 2013.

This issue, we have invited organisations who EuroScan has a MoU with or collaborates with to contribute to the newsletter. The WHO has recently sent out a call to encourage the development of innovative technologies for use in low resource settings. HTA is getting ready for its annual meeting which is in Seoul in 2013 and you can read about the recently funded Adhopta project.

In addition to the work of individual agencies the EuroScan network has been busy. In 2012, the EuroScan executive committee and members have finalised a work programme for the next 3 years. This will be published on the EuroScan website early in 2013 but work is already ongoing to improve the exchange of information and share skills and experiences in Early Awareness and Alert activities. The year ahead promises to be very productive.

Early awareness and alert activities

EuroScan's goals include strengthening activities for the development of methodological approaches to the identification, description and assessment of emerging technologies and increasing the impact of EuroScan International Network's outputs. So it was with great enthusiasm and pleasure that a number of members of EuroScan accepted the opportunity to be associate editors for an early awareness and alert (EAA) themed section in the International Journal Technology Assessment in Health Care.

The themed section was published in the July 2012 edition of the journal (Volume 25 / Issue 03) and gave a great opportunity to disseminate the work of EuroScan member agencies and others working in the field. Articles featured covered methods employed by EuroScan member agencies; implementation of an EAA; an analysis of 10 years of EAA activities in Latin America, Canada and Israel; and the use of best-worst scaling to help predict impact of emerging technologies. The editorial allowed reflection on how EAA methods and systems had evolved over the last decade (and more!) and the opportunity to present some of the methodological challenges that they face. EAA systems with the advent of emerging health technologies such as regenerative medicines, information and communication technologies, and personalized health care.

EuroScan International Network will continue to collaborate to share and develop appropriate methods that address the challenges created by an ever-changing health care sector and through our website, conference presence and this newsletter will share the work of the network.

Stine Nørgaard
EuroScan Newsletter Editor

HealthPACT
emerging health technology

Health Policy Advisory Committee on Technology - HealthPACT

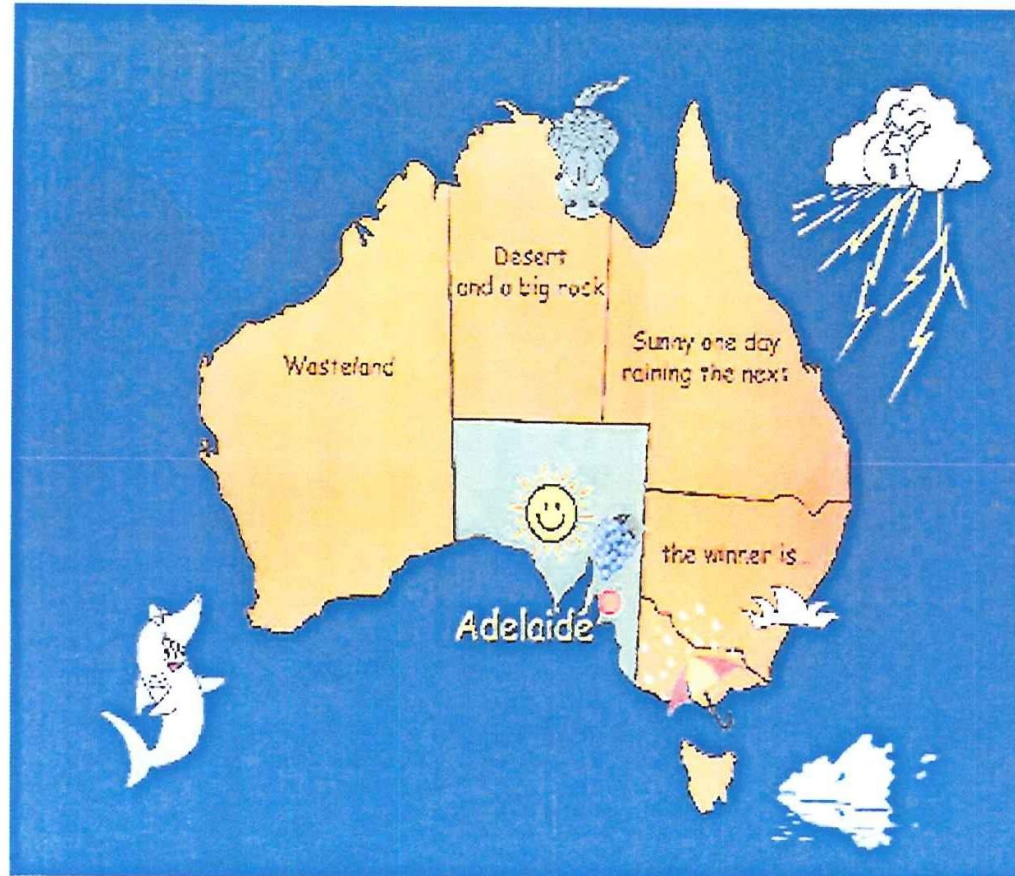


Professor Brendon Kearney
Chair, HealthPACT



HealthPACT

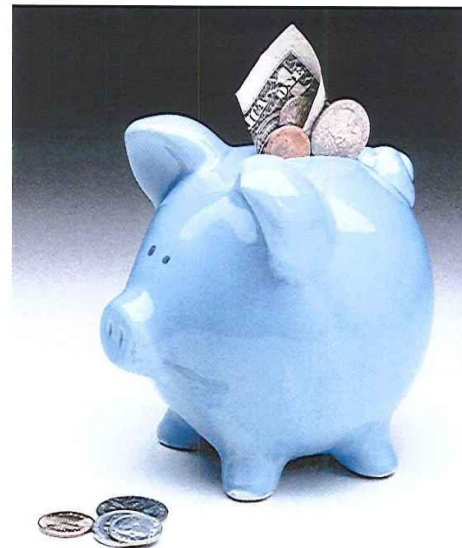
emerging health technology



HealthPACT

emerging health technology

- Health care costs continue to increase
- 30-40% of the annual increase in health care costs are due to new and emerging technologies



HealthPACT

emerging health technology

Regulation and HTA in Australia

- Therapeutic Goods Administration (TGA) – regulatory body
- Pharmaceutical Benefits Advisory Committee (PBAC) – TGA approved pharmaceuticals
- Medical Services Advisory Committee (MSAC) – mature non-drug, TGA approved technologies. Now assessing co-dependent technologies: pharmaceutical + device
- Prostheses List Advisory Committee – private health insurance
- **HealthPACT** – horizon scanning of new and emerging *non-pharmaceutical* technologies



HealthPACT

emerging health technology

Governance

Australian Health Ministers' Conference (AHMC)



Australian Health Ministers' Advisory Council (AHMAC)



Hospitals Principal Committee (HPC)



Health Policy Advisory Committee on Technology (HealthPACT)



HealthPACT

emerging health technology

HealthPACT Membership consists of representatives of:

- Australian States and Territories
- New Zealand Ministry of Health
- New Zealand District Health Boards
- Medical Services Advisory Committee
- Hospitals Principal Committee
- Department of Veteran Affairs
- Therapeutic Goods Administration



HealthPACT

emerging health technology

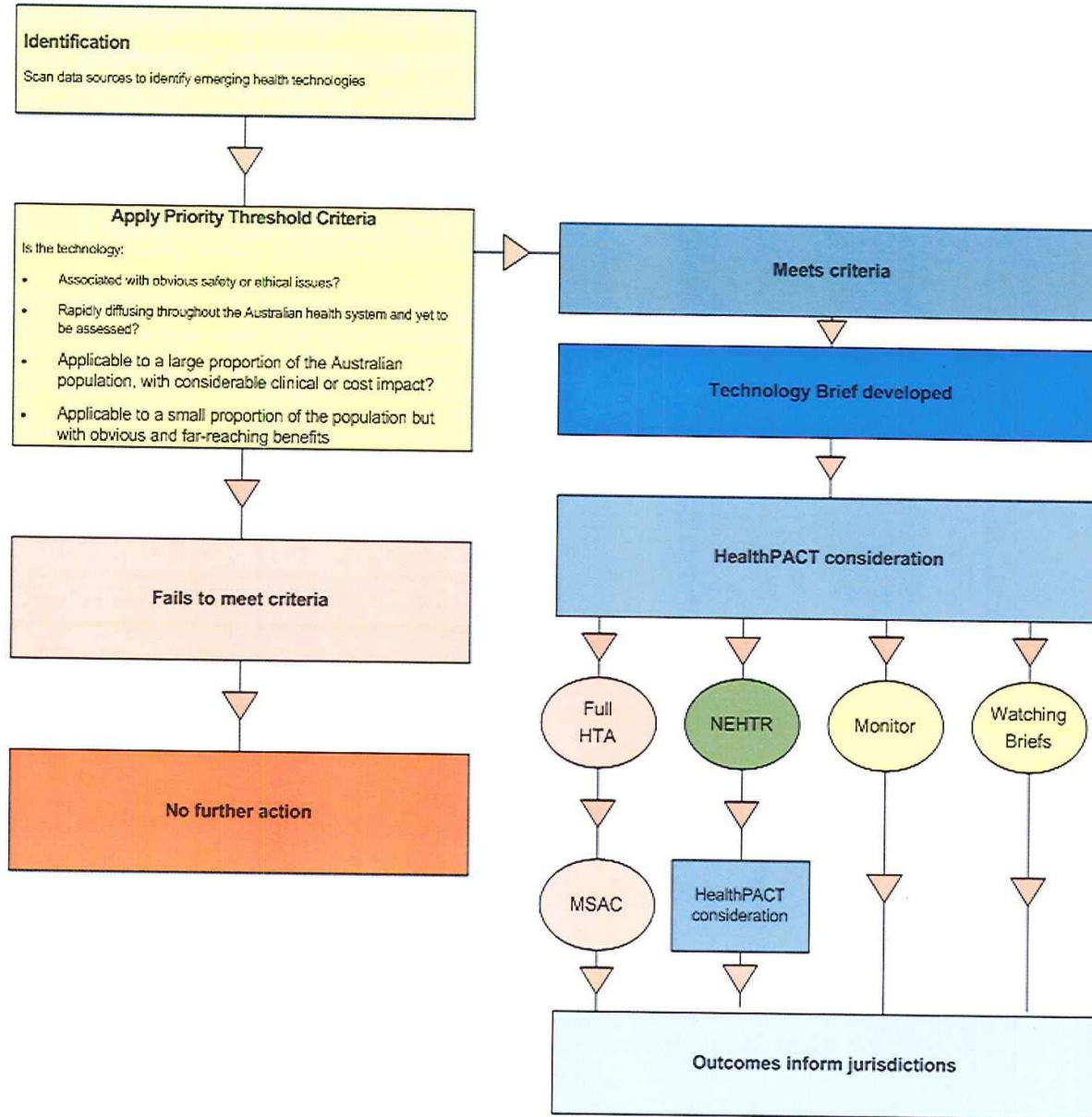
Priority setting:

- Jurisdictional strategies
- Volume and cost
- Clinical need
- Rate and pattern of diffusion
- Estimated cost impact
- Efficacy and safety issues
- Ethical issues
- Cultural or religious issues



HealthPACT

emerging health technology



HealthPACT

emerging health technology

HealthPACT provides information to assist in the effective introduction and use of technologies in Australia and New Zealand through:

- scanning relevant data sources to identify new and emerging health technologies
- preparing or commissioning a range of **new and emerging technology reports and technology briefs**
- distributing an electronic newsletter quarterly to all jurisdictions



HealthPACT

emerging health technology

Scanning sources:

- Specialist medical and scientific journals
 - BMJ, Lancet, MJA, NEJM etc
- Media
- Clinical trials
- Conferences
- Regulatory agencies
 - TGA, FDA
- Clinical specialties and hospitals through state technology advisory committees
- Industry
- Other HTA agencies
 - EuroScan members, AHRQ, NICE



HealthPACT

emerging health technology

Dissemination of information:

- Publication of all Technology Briefs and New and Emerging Health Technology Reports on the HealthPACT website

<http://www.health.qld.gov.au/healthpact>

- Distribution of a quarterly electronic newsletter to all jurisdictions

- Publication of all Technology Briefs and New and Emerging Health Technology Reports on the EuroScan database

<http://euroscan.org.uk>



HealthPACT

emerging health technology

HealthPACT's intent

- Better engagement with industry throughout the entire life-cycle of technology development and introduction, but particularly in the early introduction of new technologies
- Consultation with Industry on work program
- Consultation on reports
- Work to support Clinical Trials for significant new technologies



HealthPACT

emerging health technology

Reports:

- New Technology Briefs
- New and Emerging Technology Health Reports (NETHR)
- Consult with jurisdictions, clinicians, manufacturers
- Technical advice
- Bulletin newsletter
- HealthPACT website



HealthPACT

emerging health technology

Outcome:

- Archive
- Monitor
- Commission a New and Emerging Health Technology Report
- Refer for full Health Technology Assessment
- Write position paper



HealthPACT

emerging health technology

Recent issues identified by HealthPACT:

- Trans-catheter aortic valve implantation (TAVI)
- For the treatment of symptomatic aortic stenosis
- At the time TAVI device not approved by the regulator TGA
- Diffusing rapidly throughout the jurisdictions
- High cost device (\$25-30,000 for the device alone)
- Highly controversial – limited data on the long term durability and cost effectiveness of the device
- Patient selection critically important: should only be performed in patients with *inoperable* aortic valve disease
- Potential to significantly impact on health budgets if performed in patients with *operable* aortic valve disease



HealthPACT

emerging health technology

Recent issues identified by HealthPACT:

- Renal denervation
 - For the treatment of refractory hypertension
 - Several devices approved by the regulator TGA
 - Diffusing rapidly throughout the jurisdictions
 - High cost device (in excess of \$10,000 per patient)
 - Potential to significantly impact on health budgets due to large number of patients
 - Highly controversial –
 - Initial results from RCTs showed a reduction in BP of up to 30 mmHg
 - No long-term data effectiveness data, especially on outcomes such as morbidity and mortality from stroke and cardiovascular disease
 - Some patients have undergone multiple procedures
 - Some patients remain on medication



HealthPACT

emerging health technology

Both of these technologies highlight the need for:

- Clinical trials with defined patient criteria and appropriate data collection to allow determination of the long-term clinical effectiveness and cost-effectiveness of the device
- A well funded, national device registry



HealthPACT

emerging health technology

HealthPACT initiative is to coordinate the introduction of technologies into the Australian Health Care System

For example:

- **Percutaneous Mitral Valve Repair Forum May 2011**
 - Clinicians, policy makers, and industry representatives from Australia and New Zealand discussed the status and management of mitral valve regurgitation
- **Sharing of Technology Mapping across jurisdictions**
- **Intestinal Transplantation Workshop November 2011**
 - In association with NFC Reference Group
- **Vision to Reality Workshop February 2012**
 - A national forum to discuss facilitation for the introduction of new health technologies



HealthPACT

emerging health technology

Technology Briefs – recent examples

- Technologies for the Management of Stroke
- Sutureless aortic valve replacement in patients with severe aortic valve stenosis
- Exalenz BreathID[®] breath test device for the diagnosis of liver disease
- LeGoo[®] reverse thermosensitive polymer gel for the temporary occlusion of blood vessels during surgery
- MelaFind[®] for the detection of melanoma among atypical skin lesions
- PET/MRI



HealthPACT

emerging health technology

NEHT Reports - examples

- Peptide Receptor Radionuclide Therapy to treat neuroendocrine tumours
- Technologies for pathogen inactivation/reduction for blood products



HealthPACT

emerging health technology

Contact details

•Email: HealthPACT@health.qld.gov.au

•Web: <http://www.health.qld.gov.au/healthpact/>

