EuHPN European Health Property Network

Challenges and Trends in the Future Planning and Design of European Healthcare Facilities

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European Health Property Network (EuHPN):

- Not-for-profit trust, established in 2000

- Network of public sector health estates agencies, R&D organisations, academic centres, national and regional healthcare capital investment departments

- Operates through annual workshops, seminars, collaborative research, information exchange, personal networking and website

- Members in Italy, England, Ireland, Scotland, Northern Ireland, Hungary, Finland, Sweden, Norway, Netherlands, European Investment Bank

- Partners and associates in many other countries, including France, Germany, Poland, Austria, Spain, Portugal and Australia, and with other networks such as ECHAA and LCB-HEALTHCARE.

The challenges for Europe's health services

Financial:	Rising costs Lack of capital for investment
Demographic:	An older population Chronic illness Population and workforce mobility
Clinical:	Rapidly changing service and care models Emerging diseases Workforce skill mix
Technical:	Integration of IT and new medical technologies Adaptability *versus* stability
Political:	Public expectations Response to health inequalities Competition and the 'marketisation' of health

Health Estates: the response from policy makers and planners (1)

Mid-1990s until 2008: major programmes to rebuild and renew health infrastructure across Europe. Some examples:

Image: Francis Tyers, Wikimedia Commons

Norfolk and Norwich University Hospital, England

England - 1997, '100 new hospitals' (PFI) and renewal of the primary care estate (LIFT)

France – 2002, investment strategy for health infrastructure (16 billion Euros)

Italy – late '90s onwards, major reconfiguration of the health estate in many regions

Health Estates: the response from policy makers and planners (2)

Sweden – Major investment in the New Karolinska Solna University Hospital, planning from 2001 onwards.

Netherlands – new hospitals in Sittard, Groningen; remodelling of the Erasmus Medical Centre, Rotterdam.

Hungary – Strategic investment funds (in part from European Commission) have been aimed at 'big ticket' projects.

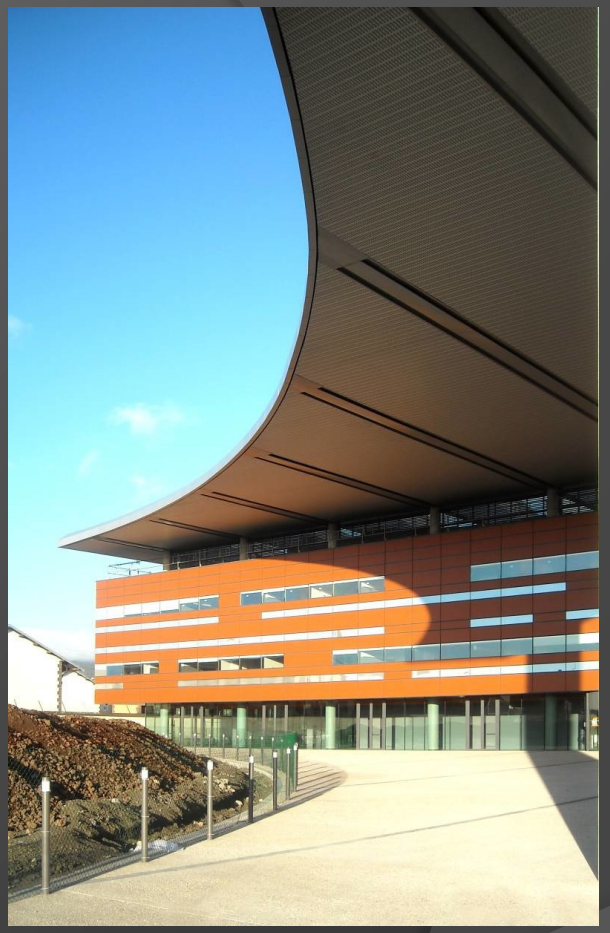


Image: bdpgroupe6

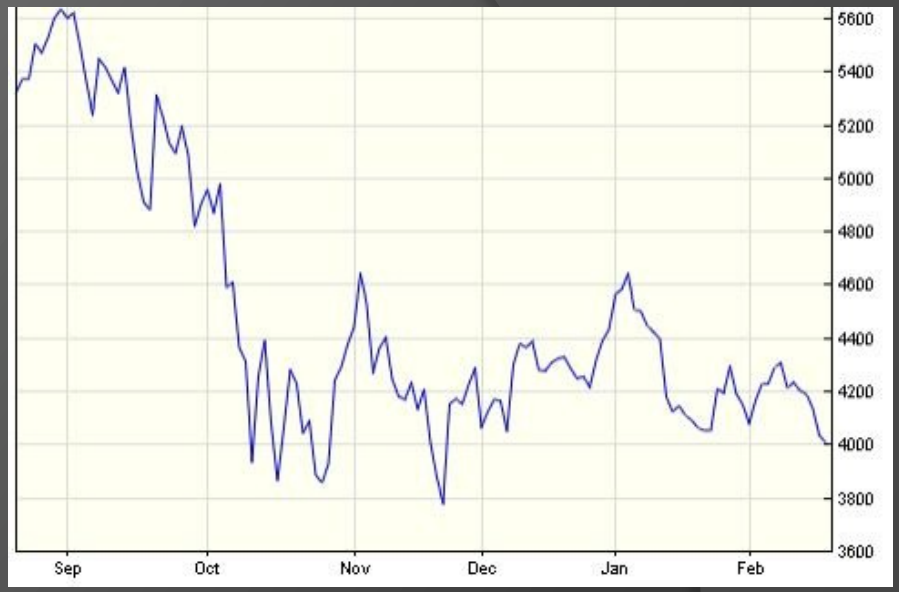
Clermont Ferrand University Hospital, France

In general, health policy makers and healthcare infrastructure planners have not challenged the status quo. Hospitals, clinics, walk-in centres, and family doctor practices have tended to be designed, located and planned in support of an old service model.

Since 2008?

- Healthcare infrastructure investment put on hold in many countries

- Increasing awareness that future capital assets – new or refurbished – have to support changing service models.

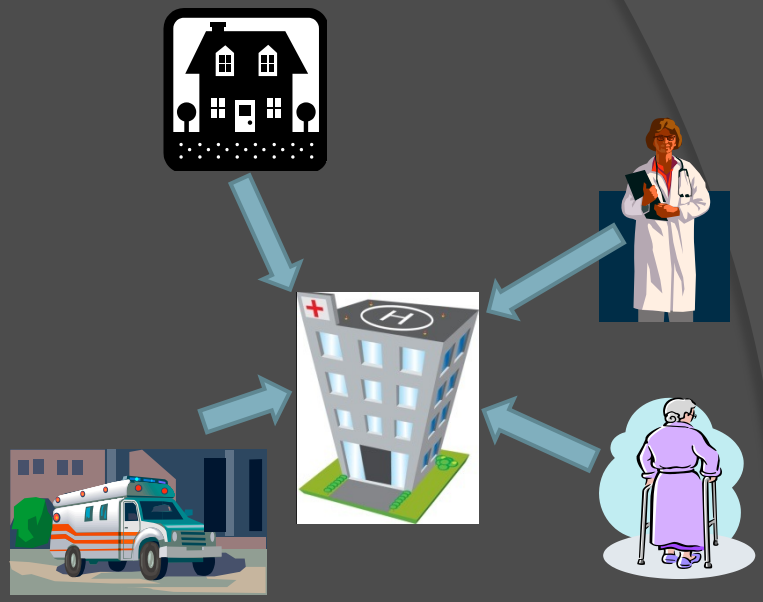


FTSE 2008 stock market

Some relevant questions:

- Are we seeing the end of the hospital centric model?
- Can community health facilities really take on some secondary care functions?
- How should we balance new construction with refurbishment and re-use?
- How far can we go with improvements to efficiency and performance?

The end of the hospital centric model?



Policy statements indicate a commitment to shifting the balance of care from hospital to community and home. But is there any evidence on the ground to support this? Is it real?

In 2008 the Netherlands Board for Healthcare Institutions (NBHI) organised *Healthcare 2025* , an international healthcare architecture and systems planning competition. The brief was to design appropriate healthcare facilities for a new Dutch city.

Many of the entries opted to abandon the hospital.

There seemed to be a consensus that the future would see high tech community health centres linked to each other and to remote specialist units, coupled with greatly enhanced e-health and telemedicine facilities.

The future for the health estate seemed to lie in **decentralised health infrastructure**.

Decentralisation (1)

In 2009 an EuHPN report, commissioned by the NBHI, set out to examine the evidence base for decentralisation of health facilities. The findings were:

- A lack published academic literature in this field
- Few examples of successful transformations to a new paradigm
- But, many drivers that promote decentralisation, including:
  - Likely failure to meet future demand for hospital services
  - Too many patients with chronic illness
  - Pressure on urgent care and A&E
  - Poor provision for children and the elderly
  - Long waiting lists for elective secondary care
  - Lack of cost control across the whole system

Decentralisation (2)

- A number of ‘anti-drivers’ that inhibit decentralisation:
  - Hospitals as icons; any change seen as an attack on the whole health system.
  - Clinicians unwilling to accept changes to working practices
  - Professional boundaries
  - Costs associated with re-training and education
  - The political cost of disinvestment
  - Disagreements over the likely clinical effects of changing the service model
  - Competition between hospitals
  - Capital asset funding models that encourage ‘big bang’ solutions.

A conclusion from this report:

“At present there is a clear direction of travel towards decentralisation of some hospital services, although there is evidence of a tendency to centralise highly complex medical and surgical procedures in a small number of specialist centres.”

... the hospital, alive and well?

Can primary and community health facilities really take on some secondary care functions?

SINTEF Health Research , EuHPN's member organisation in Norway, reported on exactly this question through a 2009 report, '*Integrated care models and the impact on services and infrastructure*', based on an international seminar that involved a number of different European countries.

The seminar included case studies from England, Italy, Norway, Finland, Latvia, Poland and Northern Ireland.

Finland (Oulu City Hospital) and Norway (Ørland; Trondheim) provided evidence of the importance of integrated ICT networks in enabling a chain of care across primary, community and social care, and hospital and rehabilitation services.

Latvia reported that despite the challenges of a relatively low GDP per capita, and other challenges to health service reform, it was still possible to achieve national level policy to promote care close to home. Poland's contribution was to point out the pitfalls of reliance on hospital care as the 'gold standard'.

Italy and Northern Ireland – at opposite ends of Europe – provided an interesting comparison, as follows:

Two regions, similar challenges and solutions ...

Table from 'Integrated care models and the impact on services and infrastructure' (SINTEF, 2009)	Tuscany, Italy	Northern Ireland, UK
Population coverage	3.6 million	1.7 million
Administrative structure	Regional Health Economy, divided into 3 'Wide Area' administrative units. Independent Hospital Trusts.	Department of Health, Social Security and Public Safety. 5 Trusts oversee health and social care.
Planning based on care pathways?	Yes.	Partially.
Drivers for service reform, clinical culture change, infrastructure renewal.	- Increasing demand for services. - Insufficient community places for discharge. - Patients with chronic illness in hospital beds. - High quality, complex care difficult in smaller hospitals. - Self-referral of patients to A&E. - Incomplete integration of primary and secondary care. - Capital investment focused on the acute sector. -Pressures on affordability.	- Increasing demand for services. - Insufficient community places for discharge. -Patients with chronic illness in hospital beds. - High quality, complex care difficult in smaller hospitals. - Self-referral of patients to A&E. - Incomplete integration of primary and secondary care. - Capital investment focused on the acute sector. -Pressures on affordability.
	- Regional govt. granted full fiscal and administrative responsibility for health care. - Emphasis on retaining principles of equity and public confidence in the health care system.	- Long waiting lists for referral from GP to hospital. - Difficulty in recruiting clinical and nursing staff.

	Tuscany, Italy	Northern Ireland, UK
Key themes	*Hospitalisation should undertaken only when absolutely necessary, and for the shortest time possible.* Source: Rechel et al (2009)	*Patient care is best seen as a system in which the acute episode is an event in an unfolding and ideally seamless pattern of care.* Source: Rechel et al (2009)
Centralisation of specialist services?	Yes. Tuscany has moved from 1 hospital for every 37,000 inhabitants (1990s) to 1 for every 90,000.	Yes. Some specialist care services have been concentrated on single sites, where previously two or three hospitals provided these services; e.g. tertiary cancer care.
Evidence of decentralisation of health care services?	Some. Primary care has been given new impetus; some hospitals now function on a 'Monday to Friday' basis, with recovery and rehabilitation taking place elsewhere. There has been experimentation with 'community' hospitals (GP-led, small scale institutions that specialise in dealing with acute episodes in patients with chronic illness.	Some. Northern Ireland has implemented a model of health care that is based on care provided at the right level, with the emphasis on preventing patients from escalating to 'higher' levels wherever possible. There is now more capacity to deal with patients in intermediate levels between primary and secondary care – e.g. 'step up / step down' beds in community health centres.
Evidence of disaggregation of hospital services.	Minimal.	Some.

Linking care across patient pathways: consequences for the health estate in North Tees, England

Some key facts:

- A region with poor population health and a legacy of chronic illness
- High performing health care services
- A hospital trust burdened with buildings dating from the 60's and 70's
- Primary care facilities in need of modernisation

The vision for the future is encapsulated in the *Momentum: pathways to healthcare* project:

- A collaboration of hospital, primary and community care clinicians, health service managers and planners, council and public health officials, and local politicians.
- Based on realisation that the status quo will not deliver safe, high quality care for the future.
- Involves continuous commitment to care pathway redevelopment
- Requires acceptance that a significant percentage of hospital-based services will be relocated to other settings, and that staff will have to change working practices.

Momentum: pathways to healthcare

Consequences for the local health economy:

- A new, single-site hospital serving two population centres.
- Three enhanced community care centres, with urgent care facilities and some diagnosis and imaging.
- Upgraded GP (family doctor) premises.
- Urgent need to integrate ICT systems.
- Integration of community health services within the hospital organisation (2009).
- Increased investment in public health measures and prevention of ill health.

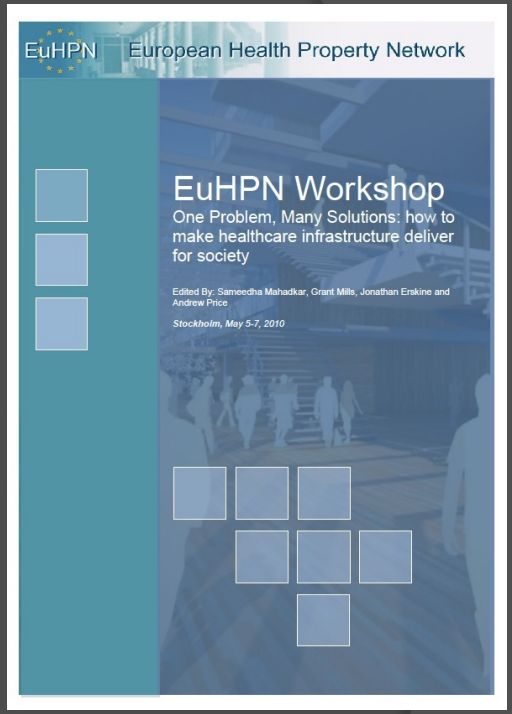
Lessons learned:

- Clinicians have to be at the heart of any shift in the locus of healthcare; senior clinical leadership is vital.
- The public must be consulted and must have meaningful input
- Planning new facilities is the easy part – agreeing and implementing the care pathways for a whole healthcare system involves years of work, many disagreements, and an ability to manage a high degree of dynamic complexity.
- There are two major challenges: changing the culture of the workforce and overcoming public scepticism.

How should we balance new construction with refurbishment and re-use?

In the face of restrictions on capital investment, shouldn't we be looking to adapt what we already have? Are there societal values in preserving some of our existing health facilities?

This was one of the key themes of EuHPN's 2010 workshop in Stockholm. Some EuHPN members are now looking very seriously at how best to re-use older buildings, with the aim of achieving the same standards, over time, that they would expect from a green field, new construction. Two Scandinavian examples:



Master planning of Södertälje Hospital, Sweden:

- Detailed re-assessment of existing structures, to include focus on adaptability, long term efficiency, care pathway support, design quality.
- Evidence gathered to determine which structures can be maintained for the long term, subject to 'patch and repair', or are suitable for new capital investment.

Use of 'continuous planning' strategy in Norway to systematise the appraisal of existing health facilities, using:

- A space classification system for capacity, productivity, and comparisons
- A care pathway tool for scenario building and activity extrapolation
- A model for future dimensioning of health buildings.

Refurbishment, Re-Use ⟷ New Construction

Health estates departments, consultancy companies, and academic centres are developing sophisticated planning tools for evaluation of the necessary balance between preserving and upgrading the existing estate or starting afresh. For example:

- SHAPE (strategic health asset planning and evaluation) is a UK-based tool that uses evidence from clinical analysis, public health data, health estates performance information, and GIS data to support strategic planning of services and facilities. Similar tools specifically for the primary care sector are also available.

- Italy has developed the MEXA (Methodology of Ex-Ante Evaluation) tool to systematise the process of deciding on capital investment priorities at regional level.

- The Netherlands has taken the lead in creating applications to partly automate the decision making process around adaptation or re-build of elderly care accommodation and nursing homes.

- In new member EU states there is recognition (nationally, and at EU Commission level) that health ministries have to encourage and develop – as a high priority – expertise in decision making around the most effective application of available capital investment funds.

How far can we go with improvements to efficiency and performance?

The last 30 years have seen astonishing progress in healthcare for Europe's population. Most countries have seen better outcomes for patients, reductions in hospital length of stay, and an increase in average age at death.

How has this been achieved?

In part, by spending money – on new drugs, new medical technologies, better training for clinicians, and improvements to the buildings that house healthcare services.

These investments are welcome, but they cannot continue indefinitely, especially in a more uncertain financial climate. Some healthcare organisations are now looking to improve performance by adopting management techniques (e.g. Lean methodologies) from other sectors. Some health services are hoping that a more competitive market will drive greater efficiency and control costs.

But is this really the answer?

Some conclusions

It seems unlikely that ‘doing the same thing, but harder’ is going to meet the future challenges for Europe’s health services.

The message from EuHPN’s member organisations over the past 3 years has been that health infrastructure can only continue to effectively support healthcare needs if:

- Measures are taken to enable whole systems, regional planning of services, linked to integrated care pathway and infrastructure development.
- Capital investment plans pay as much attention to re-use of existing facilities and incremental estates development, as they do to big bang, big ticket projects.
- Health planners and managers enable appropriate adjustments to workforce skill mix and encourage significant changes to clinical culture.
- The public can see clear, unambiguous examples of successful transition to a service model that is less reliant on acute hospital services.

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Thank you for your attention

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