Healthcare infrastructure guidance – how are we doing and where are we going?

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About the European Health Property Network (EuHPN)

- Founded as a not-for-profit Trust in 2000.
- Governmental, R&D, professional associations and academic members across Europe.
- Common interests in planning, designing, financing and maintaining all kinds of health property.
- A mission to pool and share knowledge, and to keep pace with leading edge developments in the field of health facility development.

Guidelines and Standards: EuHPN survey and review

Commissioned in 2010 by the English Department of Health's Gateway Reviews, Estates & Facilities Division, to:

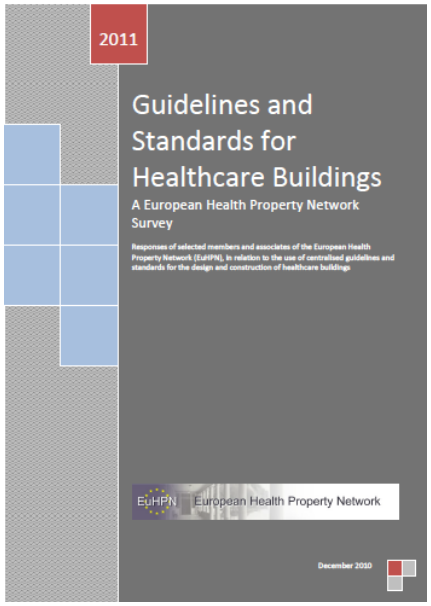
- *"... obtain answers to a series of questions about the origin, maintenance, and effect of guidelines and standards concerned with the design and construction of healthcare buildings."*

Rationale:

- *The use and direction of centralised guidelines and standards in England is now under review in recognition of* ***the plurality of provision in a regulated and market driven economy****, where commissioning of services is being transferred to GP consortia.*

Design:

- 6 week survey; 10 respondents from Australia; Finland (x2); Germany; Ireland; Netherlands; Northern Ireland; Norway; Italy; Poland; Romania.
- 12 in-depth questions on scope, use, maintenance and authority of guidance and standards documentation.



Survey analysis: selected highlights (1)

- We found a varied picture in relation to compliance, ranging from centrally-mandated and highly prescriptive guidance (e.g. Poland) to a much more 'open' and decentralised approach (e.g. Germany). In addition, **interpretation** of standards varied across and between health systems
- Where there are major reforms to health services (e.g. England), guidelines and standards lag behind, causing uncertainty and a 'gap in the market'.
- Countries or regions with an intelligent mix of mandatory standards and a menu of best practice guidelines (e.g. Northern Ireland) seem to reflect integrated healthcare structures.
- There was no clear trend towards more centralised or decentralised production of guidelines – this mirrored the general organisation of the health service.
- **Evaluation**: the 'missing piece of the jigsaw'!

Survey analysis: selected highlights (2)

- Guidelines and standards produced by large and centralised organisations tended, over time, to become increasingly **detailed, technical and prescriptive**; a less centralised approach may lead to greater scope for innovation.
- Only one country (at the time of the survey, Italy) had extensive, hospital-specific guidelines on environmental sustainability and energy/CO2 reduction strategies.
- Few countries expected **patient groups** to be part of the audience for health building guidelines and standards – weren't their views important?
- Freedom to choose which standards, and which guidelines to follow, divided into two groups: (1) at least meet minimum standards; other design features have to be financially justified; (2) a broad suite of design standards apply; deviation from them must be strongly evidenced.
- Research and evidence are highly valued, but many respondents pointed to **gaps in the knowledge base**.

Five conclusions from the review

1. Centralised production of guidelines and standards may become over-prescriptive, and may stifle innovation. However, this approach ensures some equity for planners, designers and constructors.
2. Smaller public agencies have the potential to develop high quality estates strategies and guidance, but this depends on organisational stability and good leadership, along with considerable in-house expertise.
3. Third party organisations, such as R&D institutions, can probably fulfil the same role, but they also need stability and adequate resources over the long term – and a mechanism to engage with the commissioners.
4. In health systems which are becoming more 'market-like', healthcare organisations have to be willing to accept greater responsibility (and risk) for choice of which guidelines to follow.
5. Reliance on 'in-country' guidelines and standards may be coming to an end – access to international best practice and guidance is becoming easier.

2012/2015 research and update: HaCIRIC and Building Research & Information (BRI)

From 2000 to 2015 years the English NHS became:

- Much more complex
- More regulated
- More subject to challenge
- Less stable
- Underfunded (2008 onwards)

At the same time, expertise in estates planning, design, engineering and construction was lost from the centre.

* Mills GR, Erskine J, Price ADF, Ricks E, Phiri M, Sellars P. *Developing a world-leading and smart regulartory design quality framework for healthcare estates in England.* HaCIRIC International Conference 2012.

Mills GRW, Phiri M, Erskine J, Price ADF. *Rethinking healthcare building design quality: an evidence-based strategy.* Building Research & Information. 2015. Vol. 43, No. 4, 499–515.

Some commentary on the consequences of these changes (from 2010/2011)

Cultural and attitude change is definitely an issue [. . .] it's up to an autonomous NHS, its professional advisors and industry to get together to co-produce [standards . . .] but it needs to have some branding of a sort that is recognized as being the industry leader, and impartial, and that's how our guidance is seen. (NHS trust manager)

To remove the development of standards from the DH will cost practices like ours [architects] a lot of money. [It is essential not to] lose the arm's-length body that the DH provides and the political direction/aim. (Architect)

... merchant bankers are probably risk averse people, slavish adherence to standards which [may be outdated . . .] so, everybody is comfortable that no one can be in trouble, but is it delivering what we really need? Is it cutting edge? (Healthcare policy-maker)

The regulators ... see the guidance as being absolutely essential, because that's what they assess against.

Whatever we write in the future probably needs to be written for the regulator. But it also needs to be applicable from a provider point of view.

The BRI paper: 3 scenarios for the future

1. Everything is coordinated from the top – central government command and control driving improvements in healthcare building design quality.
2. Shared responsibility among multiple shareholders driving improvements in healthcare building design quality but acknowledge limited resources and reduced central government command and control.
3. A wider delivery system of quality assurance based on new knowledge generated through externally funded research and its subsequent exploitation.

In brief...

... the future of the production and use of guidelines and standards for health care facilities is likely to involve:

- Some 'command and control' elements;
- Some market-based co-design;
- Multi-disciplinary research and knowledge creation;
- Much greater use of networks and risk sharing

But … where should the balance lie?

Coda (1): email survey of EuHPN members, 28.05.18 – 05.06.17

- Belgium: architectural guidelines for hospitals (new or refurbished) are limited; evidence-based design guidance is often adopted from nearby countries. Sustainability criteria exist, which allow for government subsidy if met, but they are limited. A view that close prescription of architectural and construction practice is not necessarily helpful. More to be done on Life Cycle Analysis of buildings and social sustainability of facilities.

- Sweden: currently in scenario 2, but moving towards scenario 3? Planning of healthcare buildings is decentralised to Swedish counties: supportive of innovation, but projects may focus too much on current needs and don't have access to available research. An integrated planning model, using Evidence-based Concept Programs (a set of planning tools) has been developed to meet this gap, using cross-disciplinary, multi-professional collaboration.

Coda (2): email survey of EuHPN members, 28.05.18 – 05.06.17

- Northern Ireland: planners/designers still use HBNs and HTMs, while recognising that they now infrequently updated. The dedicated Health Facility Planning group (now disbanded) had a role in producing standards related to the relationship between infrastructure and care models / patient experience. These documents are still in use. There is recognition that these kinds of guidance documents have significant value in driving up quality.

- Poland: continues to rely on a centralised system which mandates (often unachievable) standards for health facilities. Without major capital investment in the health estate, it is unlikely that this situation will change in the near future.

Coda (3): email survey of EuHPN members, 28.05.18 – 05.06.17

- Norway: after a period when a decentralised and/or marketised approach was taken to health building standards and guidance, Norway has moved back towards a more structured approach through the creation of Sykehusbygg, an organisation which brings together health infrastructure expertise, research and evaluation to create a dynamic knowledge base.
- Netherlands: recent attempts to reinstate a collaborative approach to development of hospital design guidance and standards; however, there is currently no clear means to fund and maintain this proposed programme. TNO continues to support leading edge research in health facility design, particularly in clinical spaces. The university medical centres show renewed interest in learning from recent capital investment projects (e.g. Erasmus MC).

Coda (4): email survey of EuHPN members, 28.05.18 – 05.06.17

- Ireland: Starting point is generally the suite of HBNs and HTMs, although specific technical standards may come from national agencies or EU working groups. When selecting design teams, familiarity with relevant guidance and standards is essential. The challenge is to ensure awareness and understanding of an increasing number of sources of guidance/standards. On occasions, 'compliance' may be required where, in fact, it is not necessary. Regular upskilling and training is clearly necessary, but not always easy to achieve.

GUIDANCE AND STANDARDS

THE FUTURE OF HBN'S/HTM'S

Carole Crane, Paul Mercer, Christopher Shaw

European Healthcare Design congress, London 2018

NHS BUILDINGS IN CONTEXT

NHS Major building programme started with Enoch Powell's Hospital Plan, (1962). It set out an equitable and strategic approach to modernising NHS infrastructure which has largely been forgotten in recent years. Standards, guidance and procedures we use today were originally conceived as tools to deliver the NHS Plan.

BACKGROUND

- The first (Hospital) Building Note was published in 1961.
- The form and content have changed over the years but the publication of new and revised Building Notes has continued.
- They have informed and set standards for all NHS hospital developments.
- They have been influential across the world and often are an essential component of a brief for an overseas hospital.

FIRST HEALTH BUILDING NOTES - STRUCTURE

There were three introductory documents:

1. HBN1 Buildings for the Hospital Service
2. HBN2 The Cost of Hospital Buildings
3. HBN 3 The District General Hospital

Plus one for each Hospital Department which provided:-

i. Scope
ii. General consideration with diagrams showing working relationships of rooms
iii. List of rooms
iv. Description of rooms
v. Engineering services

DEPARTMENTAL HEALTH BUILDING NOTES - APPENDICES

Later guidance covering hospital departments included:

- Schedules of Basic Accommodation with areas and numbers of spaces:
- Particular requirements of each department: e.g. for the Accident & Emergency Department
- The method of calculating patient load in a 3 hour peak period.

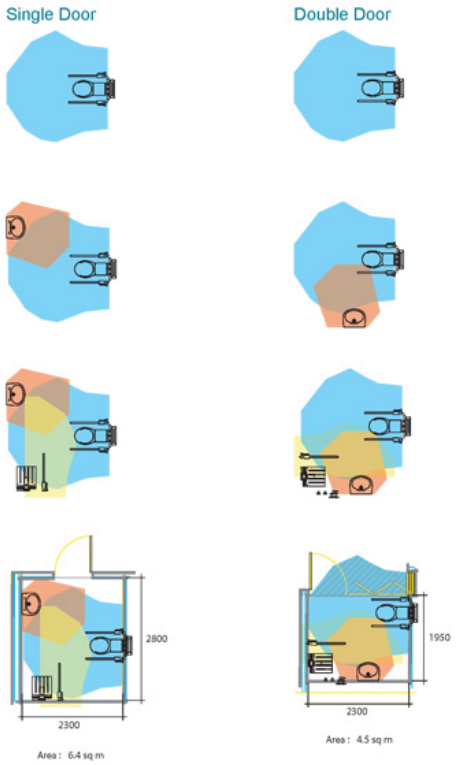
Each Departmental Building Note was issued with:-

- Schedule of Departmental Cost Allowances in the form of Appendix E to Hospital Building Note No. 2

HEALTH BUILDING NOTES - EVOLVING

This format changed over the years to include:

- operational policies and options
- workload studies
- workflow studies
- a range of sizes
- ergonomic information



DESIGN BRIEFING SYSTEM

A series of documents for use in conjunction with Building Notes to help with:-

- user requirements for a departmental design brief.
- a checklist to help guide a project team
- organisational and planning options
- generation of a list of activity spaces or rooms.

At one stage some were issued jointly with the departmental Building Note.

HEALTH BUILDING NOTES - NOW

Described as follows:

- A series of publications that set the Department of Health's best practice standards in the planning and design of healthcare facilities.
- Health building notes give best practice guidance on the design and planning of new healthcare buildings and on the adaptation or extension of existing facilities.

Titles in the series are viewable from DH Estates & Facilities Division's publication list.

HEALTH BUILDING NOTES - NOW

They provide information to support the briefing and design processes for individual projects in the NHS building programme.

- They inform project teams about accommodating specific department or service requirements.
- HBN recommendations are reflected in the cost guidance promulgated by the Department as a benchmark for demonstrating value for money in business cases.
- They are used in the management of the investment process, particularly at business case stages
- As the quality element of VfM benchmarks, they underpin the economic case for investment.

HEALTH TECHNICAL MEMORANDA (HTM)

- Publications which give comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare.
- These focus on healthcare-specific elements of standards, policies and up-to-date established best practice. They are applicable to new and existing sites, and are for use at various stages during the whole building lifecycle.
- The Health Technical Memorandum series provides best practice engineering standards and policy.

HEALTH TECHNICAL MEMORANDA (HTM)

Publications set healthcare specific standards for:-

- Building components - such as windows and sanitary ware
- Design and operation of engineering services, such as medical gas installations and fire safety requirements.
- Recommendations reflected in the cost guidance promulgated by the Department as a benchmark for demonstrating value for money in the Business Case.
- FIRECODE titles of the HTM series contain requirements on Trusts that are mandatory.

HTM's are supported by other technical guidance, such as the Model Engineering Specifications.

ARCHITECTS FOR HEALTH ROUND TABLE 2016

Key points assembled from the day:-

- DH Guidance is referred to (HBN's and HTM's) in the NHS Constitution and is hence embedded in the strategic goals of the NHS.
- The DH badge on guidance is valued the world over.
- Guidance is used as a standard and basis for legal cases
- Unanimous agreement that guidance should be continued.
- Guidance should be supported by evidence.
- Post Occupancy Evaluation should be an integral part of projects.

ARCHITECTS FOR HEALTH ROUND TABLE 2016

Key points:-

- Inputs to guidance should reflect international practice where relevant and not be parochially wedded to UK.
- Refurbishment and upgrades should have appropriate guidance.
- Resources across the UK (England, Scotland, Wales and NI) could be pooled.
- Integration with procurement systems is important.
- Guidance development should link in to the Carter efficiency work.
- Consensus from across the healthcare design and construction industry is vital.

ARCHITECTS FOR HEALTH ROUND TABLE 2016

Recommendations for action:-

- That the "badge" of the Department of Health should be retained on guidance material and hence,
- DH should retain an overview.
- That a pan-industry stakeholder group be established to give advice and consult on future direction, content and management of guidance: and that the stakeholder group be widened across the full spectrum of interests to ensure that clinical, nursing, patient and carer interests are fully represented.
- That a small core group be established under the overview of DH, to take responsibility for a programme of work as supported by and in consort with the wider stakeholder group.

ARCHITECTS FOR HEALTH ROUND TABLE 2016

Recommendations for action:-

- That the core group and the stakeholder group should be transparent and open in working with the wider healthcare design and construction industry.
- That guidance henceforth be predicated on robust post occupancy evaluation and evidence based outcomes: and that a standardised methodology for conducting post occupancy assessments be urgently devised and introduced.
- The future plan should be realistically costed and transparently run.

ARCHITECTS FOR HEALTH MEMBERS SURVEY 2017

Survey was open to all throughout the summer.

- Responses received from architects, engineers, health planners, clinicians, nurses, researchers, health and safety advisors.
- 69% of the respondents were in Private practice, 19% from NHS, and 12% other.
- 54% design/build side, 37% client/briefing side, and 9% other.
- When asked for comments these were some of the responses:-

ARCHITECTS FOR HEALTH MEMBERS SURVEY 2017

"I am unhappy that the new HBN contains less useful dimensions. Often I need to see old HBN 40 to design FM spaces."

"The system and suite of guidance is increasingly poorly matched to the decision sequence for planning and realising UK heath infrastructure."

"I refer to them only because the client insists on compliance."

"The guidance should be a single volume with no more than a dozen sections and should be funded by DH and because it would be a much scaled down guidance, should be available to all as a download, free of charge."

ARCHITECTS FOR HEALTH MEMBERS SURVEY 2017

"Succinct, informative HBN's and HTM's are very useful at all levels of briefing and design development. However it should also be made very clear that these are guidance documents and that deviation from these is sometimes necessary for innovation and achieving best value."

"Recently much of the specific technical guidance in HBN's / HTM's has been removed in favour of generic guidance - much of which is contradictory. However, many healthcare trusts insist contractually that ALL guidance must be complied with".

ARCHITECTS FOR HEALTH MEMBERS SURVEY 2017

"All of the HBN's should be combined into one searchable document arranged according to clinical area/specialty. This will eliminate the needless repetition of information throughout the HBN documents".

"Guidance must remain, but be subject to a regular refreshing, with evidence based approach to identifying case studies /exemplars / best practice / lessons learnt and actual outcomes".