

# How will primary care, tech and building design combine?

HEALTHPOD



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# Introduction

In 2017, our team set out to explore how healthcare building design around the world was changing. Their research, captured in our paper [Designing the Future](#), concluded that: "If our trawl of international healthcare building design to inspire GP buildings tells us anything, it's that one size definitely doesn't fit all. Even as new models of care evolve, buildings for primary care will need to be as unique as the communities they serve."

Whilst many of the fundamental principles behind these design ideas hold true for any attractive, effective public space, they are not well-represented across all primary care buildings today. But they can act as prompts to ensure that in designing new primary care spaces, we scrutinise ever more deeply how patients and staff experience them and how these buildings can interlink with other parts of our lives – now and in the future."

Since then, we've been asking ourselves what those primary care spaces might look like. We took our research to the next stage, creating a concept design for a primary care centre of the future. It draws on the best practice we observed in countries all over the world, and is informed by primary care's evolving use of technology and its role in delivering the NHS Long Term Plan .

Treatment Centre model "to provide a locally accessible and convenient alternative to A&E for patients who do not need to attend hospital", the Long Term Plan raises a range of questions for the capacity of NHS buildings like this one. It will need to facilitate the integrated clinical teams facilitated by Primary Care Network contracts, for example, along with social prescribing link workers and clinical pharmacists.

A 2030 building will need to use space smartly so that remote consulting is not taking up unnecessary space in classic, larger consulting rooms but instead using smaller spaces – leaving the larger consulting rooms and examination areas for face-to-face work. The design of the remote consulting spaces is very simple: smaller than the current average consulting room, but created for use on a rota system for whichever clinicians are on video 'duty' for that day. When not in use for remote consulting, they can be used for quicker face-to-face appointments – with clinicians and patients moving to one of the shared examination areas when needed (as most consultations do not require an examination on the couch). This flexible mix of remote and physical consulting space will be key: some conditions simply cannot be assessed or treated via a video call.

As well as creating these flexible spaces in the layout, the building design will need to accommodate the technology and hardware for remote consulting: high quality screens and powerful network infrastructure will be essential, with current issues such as lack of interoperability between systems eliminated.

# Remote consultation

- An essential tool: the NHS Long Term Plan states that all patients will be able to see a GP remotely within the next five years
- Consultations can be quicker and can triage less serious cases.
- People who don't feel able to go to the building in person still have access to GP services
- Fewer face-to-face appointments solely for monitoring
- More flexible for patients: remote appointments during a break at work, or for very quick discussions
- Staff have more time for consultations on complex, long-term conditions
- The option of remote working can improve GP recruitment and retention

The principle of remote video consultation has strong government support and a range of delivery methods already exist around the country, ranging from surgeries offering their own Skype call arrangements and practices joining forces with app-based services. Across all, the basic principle is the same: patients book a video appointment via an app or website and choose a time slot that suits them. GPs then carry out the video call and assess the patient remotely, with face-to-face follow up if required.

## In design

Perhaps counter-intuitively when thinking of remote consulting, it is location, location, location which will still be a real driving force behind the design and creation of a 2030 medical centre. NHS England has set down that all digital providers must offer physical premises in CCG areas where they have more than 1,000 patients registered, but is clear that the priority is to support existing practices to digitise their offer.

With this in mind, our 2030 facility needs to create great space for remote consulting whilst also being accessible for patients, in the right place for its community and – crucially - with enough space for the services that primary care wants to deliver, which will be beyond the traditional limits of general practice.

Alongside remote consulting, the NHS Long Term Plan sets out plans to "boost of 'out-of-hospital' care, and finally dissolve the historic divide between primary and community health services." In addition, the primary care workforce will be bigger: "Expanded neighbourhood teams will comprise a range of staff such as GPs and SAS doctors, pharmacists, district nurses, community geriatricians, dementia workers and AHPs such as physiotherapists and podiatrists/chiropodists, joined by social care and the voluntary sector." Combined with the full implementation of the Urgent Treatment Centre model "to provide a locally accessible and convenient alternative to A&E for patients who do not need to attend hospital", the Long Term Plan raises a range of questions for the capacity of NHS buildings like this one.

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# Point of care diagnostics

- Better patient experience: potential for quicker diagnosis and treatment starts, fewer journeys to different sites
- Fewer hospital visits/stays
- Reduced treatment costs: can be set up in standard locations
- Potential to advance personalised medicine more accurately for individual patients.

The Long Term Plan sets out that by 2023, "diagnostic imaging networks will enable the rapid transfer of clinical images from care settings close to the patient to the relevant specialist clinician." Diagnostic services - either through pathology in laboratories or imaging like scanning, ultrasound and radiology - already play a vital role in identifying problems and informing medical interventions, and demand for them has been fuelled by an ageing population, less healthy lifestyles and national screening initiatives.

Use of diagnostic technology at the point of care – within the medical centre itself - allows clinicians to accurately achieve real time, laboratory-quality diagnostic results in minutes. This offers huge potential to improve efficiency and productivity and to simplify processes and procedures – but most importantly of all, potential to improve the experience for patients. Whether it's getting started on a treatment pathway more quickly or simply putting a worried mind at rest within minutes, point of care diagnostics have much to contribute. With this in mind, our 2030 facility needs to create great space for remote consulting whilst also being accessible for patients, in the right place for its community and – crucially - with enough space for the services that primary care wants to deliver, which will be beyond the traditional limits of general practice.

As technology advances, the capacity and mobility of this equipment will mean that more tests will be carried out in primary care, including diabetes testing and cardiac and blood analysis. Where off-site analysis is required, data will be rapidly sent to specialist laboratories with results received back within minutes.

There remains wariness from some clinicians as to the value of point of care diagnostics, but costs and ongoing debate about the pace and efficacy of digitisation may be overshadowing the discussion. By 2030, if the Long Term Plan is fully delivered, use of digital technology across the NHS will be an accepted norm in day-to-day care and NHS buildings will need to reflect this.

## In design

As technology advances, point of care diagnostic devices will be used in any clinical treatment room and will not require specialised fixtures or fittings, although some practices may want a dedicated diagnostic room or suite.

Space to accommodate lower dose MRI, CT, X-ray and ultrasound diagnostic scanning systems will also be important as they become more affordable for use in a community medical hub through collaborative funding partnerships with the suppliers, CCGs and primary care users. And by 2030, advances in nanotechnology will enable an even greater range of digital imaging and diagnostic services in the community as a matter of course.

# Digital media

- Logical way to communicate health and wellbeing messages to patients
- Already widely adopted and embraced in its basic form
- Supports information-sharing on resources and services, as primary care networks evolve, and community and outpatient activities move closer together
- Delivers information on self-management, monitoring and care – a sharing channel for the NHS App Library.
- Promotes social prescribing options
- Channel for other core community information: from the local authority, schools, leisure centres, parks, local groups and organisations
- Used creatively, supports a calming yet interesting interior design.

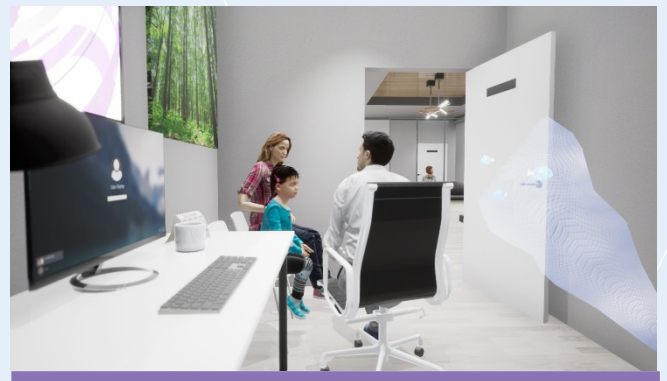
Waiting room media has not changed greatly over the last few decades, but the principle – combined with the fact that free Wi-Fi is now widely offered – offers huge potential to help patients navigate a building, be informed and entertained while they're there and to experience a more pleasant design environment, as the use of digital technology in the NHS grows. The traditional waiting room TV which displays a basic library of health-focused content along with practice and patient information is already common in most surgery buildings, some with more sophisticated patient call systems. The future may range from interactive screens to entire digital walls sharing messaging, inspiring scenes and hologram shapes to help entertain children, along with apps to alert patients when it's their turn to see a clinician.

Existing media technologies will evolve to be much more important in the functioning of a practice. Digitisation of services, collaboration through primary care networks and a greater breadth of professionals working together in primary care all require effective communication and signposting, and digital media can be a conduit to this.

## In design

TV monitors, digital signage and digital 'walls' are easily installed in any building design, but are often an afterthought. In the future, the use of digital media will be a fundamental part of the building design – providing a fully interactive experience for patients. The use of digital media in design will help to create a non-institutional environment where patients can make best use of their time there.

Automated touch screen self-check-in terminals are already a familiar sight for many practices, but in a 2030 medical centre they will be part of the furniture – allowing for big changes in the look of the centre's welcome area as the traditional reception desk and records area disappears. Digital health information will flow through the waiting area and later, a 'check-out' screen will automatically send all relevant health information to a patient's handheld device if they so choose.



In other sectors, technology has been embraced to improve customer experiences: in the restaurant sector, apps allow us to book a table, be alerted when it's ready and order our meals and by 2030, this sort of technology may well support patients to use the medical centre building in a different way while they wait to see a clinician – allowing them to walk in the garden outside, enjoy a drink or snack in the building's café or work in one of the seating areas until they're called by their clinician.

## Conclusion

We've looked at three simple ways in which the use of technology will change the design of primary care centres over the next decade. There are many, many ways in which this technology and the design which follows from it can create more pleasant environments for patients, workplaces which are exemplars for the health of the NHS teams working within and places which help us all to live more healthily.

The reality of our 2030 medical centre design may seem futuristic to some, but in looking at how technology and building design are converging in other sectors, we believe it is the very least that patients and staff will come to expect of a building which must deliver the epitome of 'customer care'.

The challenge now is for all of us – patients, clinicians and commissioners of these buildings - to begin to think differently about design. We should learn from what works in other public spaces. Design with the people who will use these buildings. Above all, we must embrace the opportunities offered by technology to create buildings which resonate wellbeing, and which play an active part in helping us to live more healthily.



# Sources

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<sup>2</sup> <https://www.england.nhs.uk/long-term-plan/>

<sup>3</sup> <https://www.kingsfund.org.uk/publications/technology-NHS-estate>: The King's Fund

<sup>4</sup> <https://www.england.nhs.uk/wp-content/uploads/2019/09/BM1918-6-digital-first-primary-care-consultation-outcome.pdf>





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