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Community Diagnostic Centres

Guidance for planning, design and
implementation

1 June 2022

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Produced by NHS South, Central and West (SCW) for and on behalf of NHS England and NHS Improvement.

1. Summary

1. Demand for almost all diagnostic services in England was growing before the COVID-19 pandemic, and the pandemic has exacerbated pre-existing challenges.
2. A key recommendation of the Richards' Review of NHS diagnostic services was the development of community diagnostic centres (CDCs) to provide separate, dedicated locations for carrying out elective diagnostic procedures.
3. Systems must ensure CDCs contribute to meeting the six primary aims of the CDC Programme – improved population health outcomes; increased diagnostic capacity; improved productivity and efficiency; reduced health inequalities; improved patient experience; and support for the integration of primary, community and secondary care.
4. CDCs must also meet a number of cross-cutting programme aims and objectives, including: improving staff development and satisfaction; making every contact count and supporting health promotion; acting as test sites for quality improvement, research and innovation; contributing to the NHS Net Zero ambitions; sharing learning across CDCs and systems; and acting as anchor institutions.
5. CDCs will provide a broad range of elective diagnostics away from acute facilities, many in a 'one stop shop' setting. All CDCs must meet key minimum requirements as set out in this guidance, including delivering specified diagnostic tests. CDCs must conform to one of three main models: standard (providing the minimum diagnostic tests), large (also providing endoscopy and/or other services) or hub and spoke.
6. This publication updates the draft guidance issued to systems in 2021/22. It sets out guidance and best practice for systems on planning, designing and implementing CDCs; including on commissioning, planning governance, engagement, estates and site selection, digital connectivity, workforce development and pathway development. Systems must take account of this guidance in their planning and modelling. We will update it as the programme develops.

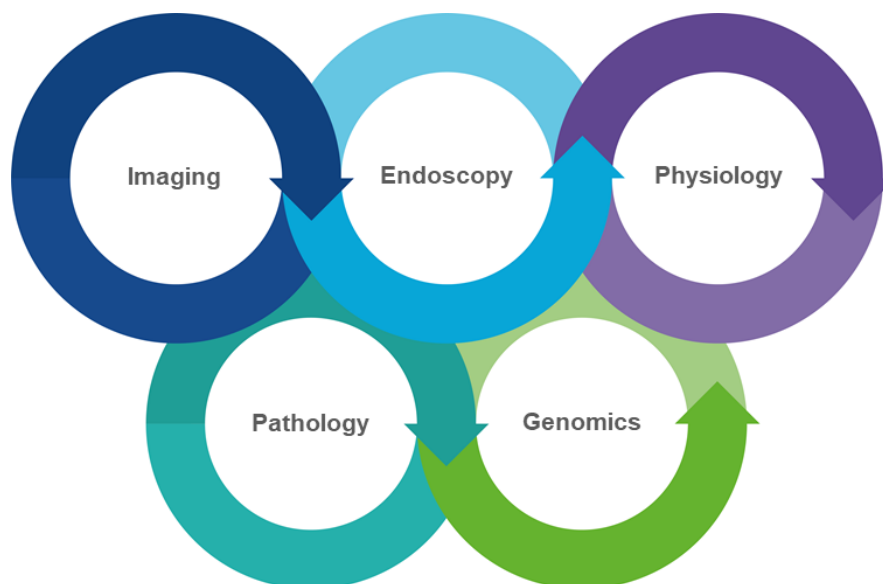
7. Effective engagement with a wide range of stakeholders, including the public, primary care, local authorities and local imaging and pathology networks, is essential for successful implementation. Systems must carefully consider how they can best adapt local clinical pathways to take advantage of CDCs.
8. The government has committed £2.3 billion of capital funding over the next three years to transform diagnostics, including by rolling out CDCs with the expectation that they will increase elective diagnostic provision across systems over these years.
9. Year 1 of the CDC Programme has been a foundation year, concentrating on setting up the programme and working with a number of early adopter and Year 1 CDC sites to refine the CDC model. In the first 12 months of the programme, 77 standard and large CDCs (plus associated CDC 'spokes') became operational.
10. Focus is now on moving the CDC Programme forward through the development and rollout of Years 2 to 4 CDCs. In Years 2 to 4, systems should ensure that they have at least one standard or large CDC in place. In some geographies 'spoke' sites will also bring benefits for patients, but systems are reminded that 'spokes' must be hosted by a standard or large CDC site – and one that the system hosts or shares the governance of (the archetype of large or standard then becomes a 'hub' to this spoke). GP direct access will be supported in all CDC sites supporting utilisation of the growing number of CDC pathways in place with clear health care benefits demonstrated.

2. Background and policy context

1. Diagnostics form part of over 85% of all clinical pathways. Every year, the NHS spends over £6 billion on over 100 diagnostic services, and carries out an estimated 1.5 billion diagnostic tests.
2. Diagnostics is recognised as a priority in the [NHS Long Term Plan](#). Getting diagnostic provision right is a key enabler of several of the plan's commitments, including those on cancer, heart disease, respiratory disease and musculoskeletal (MSK) conditions, along with outpatient transformation. Increasing diagnostic capacity can be expected to improve care outcomes for major health conditions by

providing quicker access to diagnostics and therefore earlier diagnosis. It also indirectly supports broader ambitions to transform health and care services.

3. Professor Sir Mike Richards' [independent review of NHS diagnostic services](#), published in October 2020 (hereafter referred to as the Richards' Review), identifies five key categories (or modalities) of diagnostics.



4. Diagnostic investigations are required both for urgent and emergency care (eg for emergency departments and inpatient wards) and for elective services (including requests from primary care and outpatient clinics), and demand for one type of test often impacts on the capacity available for others.
5. Elective diagnostic services are subject to the operational standard that patients should wait a maximum of six weeks for any diagnostic tests.¹ Historically, demand has continued to grow year on year. The Richards' Review identified significant growth in activity across almost all aspects of diagnostics over the past five years, but this has been outpaced by the demand for diagnostics rising faster than that for NHS services as a whole. As a result, and exacerbated by the pandemic, many patients are now waiting longer than six weeks for a diagnostic test.
6. The Richards' Review sets out the case for increasing diagnostic capacity in England, and for a new model of diagnostic service provision. A key

¹ The applicable [NHS standard](#) states that less than 1% of patients should wait six weeks or more for a diagnostic test.

recommendation was for the rapid development and rollout of community diagnostic centres (CDCs).² These are separate, dedicated locations for carrying out elective diagnostic tests, ideally away from acute hospital sites.

7. NHS England³ is leading this rollout across England over the next few years through the CDC Programme. This is part of a broader programme of work to drive and co-ordinate cross-cutting diagnostic transformation activity to ensure the NHS can deliver the right tests, at the right time and in the right place to inform the advice, treatment and support for each patient.
8. This publication sets out guidance and best practice for systems on planning, designing and implementing CDCs; including on commissioning, planning, governance, engagement, estates and site selection, digital connectivity, workforce development and pathway development. Systems must take account of this guidance in their planning and modelling. This document updates the draft guidance issued to systems in 2021/22, and we will continue to update it as the programme develops.

3. What is a community diagnostic centre?

“Community diagnostic centres will deliver additional, digitally connected, diagnostic capacity in England, providing all patients with a co-ordinated set of diagnostic tests in the community, in as few visits as possible, enabling an accurate and fast diagnosis on a range of clinical pathways.”

NHS England and NHS Improvement National CDC Programme Vision Statement

² The Richards’ Review uses the term community diagnostic hub (CDH) as opposed to community diagnostic centre (CDC). The only difference is one of terminology: CDC better reflects the nature of these places as community centres where individuals can access diagnostic services closer to home. The broad aims and key principles remain the same.

³ Until 1 July 2022, the regulatory body referred to as ‘NHS England’ in this document will still be known as ‘NHS England and NHS Improvement’. References to ‘NHS England’ should therefore be understood to mean ‘NHS England and NHS Improvement’ during this interim period

1. CDCs provide a broad range of elective diagnostics (including checks, scans and tests) away from acute facilities; so reducing pressure on hospitals and providing quicker access to tests and greater convenience to patients. Many will provide diagnostics in a 'one stop shop' setting.
2. The model of care delivered by CDCs promotes convenience for patients by co-ordinating all necessary diagnostic tests and, wherever possible, delivering these at a single visit. This is also likely to contribute to NHS Net Zero as patients will make fewer and often shorter journeys to access diagnostic testing.
3. A CDC is located separate from other acute hospital services: either within a dedicated building on an existing acute site, or ideally on a separate site. It must conform to one of three broad design models (archetypes):

Archetype	Description
 Standard model	A standard CDC provides at least the minimum diagnostic tests outlined in this guidance (see Table 1). It may also provide any other suitable diagnostic tests that are deemed to be a priority locally.
 Large model	A large CDC must meet all the requirements of a standard CDC . It must also offer endoscopy and/or any other services/tests required locally (eg ophthalmology, audiology, health checks and screening services). It also provides other components of the diagnostic pathway (such as outpatient consultations) and co-located services (eg radiology). Scalability is an important feature of a large CDC, eg centres may have multiple scanners to improve efficiency/effectiveness.
 Hub and spoke model	The central 'hub' must provide at least the minimum diagnostic tests outlined in this guidance, as per requirements for a standard CDC. CDC 'spokes' provide extra capacity for specific tests or to reach certain populations through a satellite location. They may also help integrate CDC models with other expansions in community diagnostics (eg primary care diagnostic services).

4. A CDC 'spoke' is a smaller CDC site that due to location, population demand or overall system infrastructure and healthcare needs must include more than one modality, including any on the agreed CDC test list, with one large imaging modality and other diagnostic tests, but does not need to include all the core

modalities a standard or large CDC site does. It must have a defined location and be able to report its activity independently to its 'hub'.

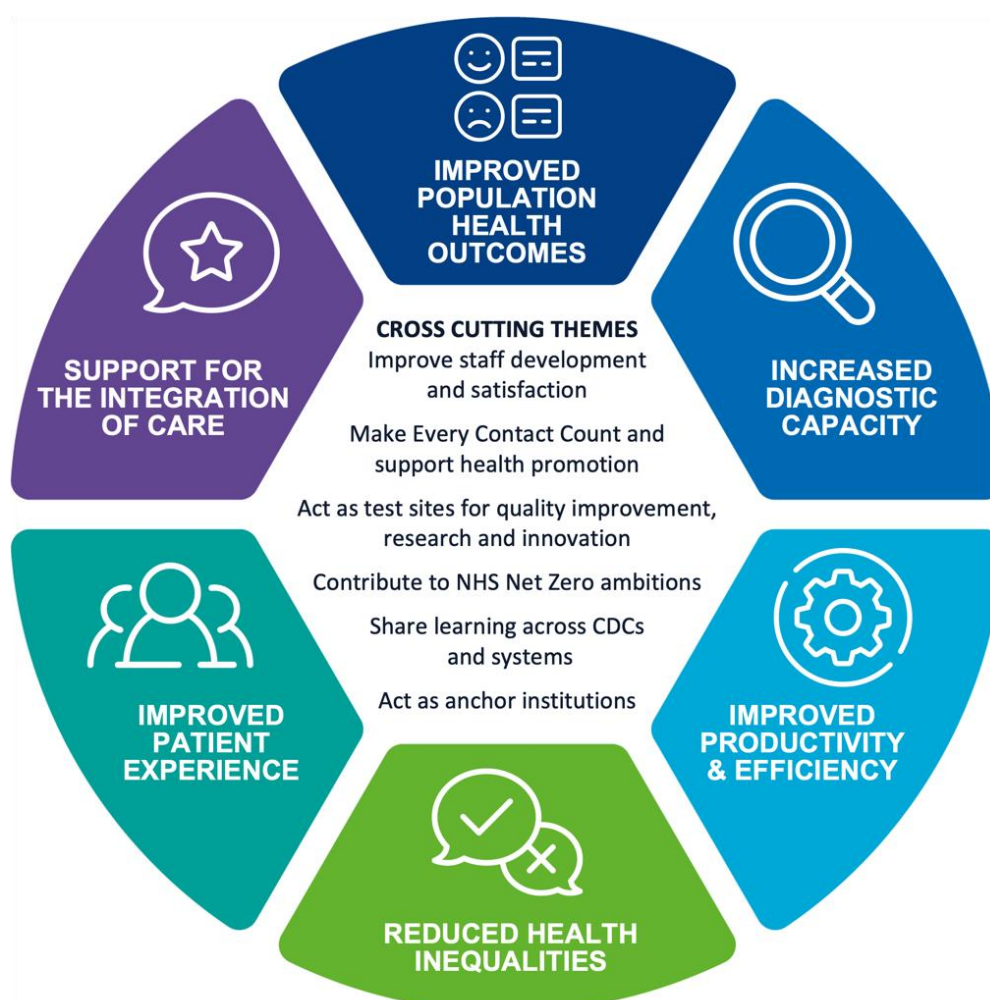
5. These models are designed to ensure CDCs conform to a set of common standards, while giving systems the flexibility to tailor local facilities to meet local needs and deliver value for money.
6. A CDC must meet agreed minimum requirements, including providing the agreed minimum set of diagnostic tests in a permanent manner (see Table 1 below; and Appendix A for more information).
7. It is important that systems do not feel limited to providing only the minimum set of tests. Additional tests can be offered, and systems are encouraged to provide other tests where appropriate and deemed to be a priority locally (see Appendix B).

Table 1: Minimum set of diagnostic tests

Diagnostic modality	Minimum requirements
Imaging	• CT • MRI • Ultrasound • Plain X-ray
Physiological measurement	• Electrocardiogram (ECG) including 24-hour and longer tape recordings of heart rhythm monitoring • Ambulatory blood pressure monitoring • Echocardiography (ECHO) • Oximetry • Blood gases • Fractional exhaled nitric oxide (FeNO) • Spirometry including bronchodilator response • Lung volumes and gas transfer • Simple field tests (eg 6-minute walk test) • Some sleep investigations
Pathology	• Phlebotomy • Point of care testing • NT-proBNP • Urine testing

Endoscopy (larger CDCs only)	• Gastroscopy • Colonoscopy • Flexi sigmoidoscopy
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8. All standard and large CDCs and some 'spoke' diagnostic services provide phlebotomy as one of their core tests and have arrangements for couriering blood samples to pathology network laboratories. Phlebotomy services in CDCs are not intended to replace those provided in primary care but attending a CDC may be an alternative option for patients where appropriate. Similarly, some phlebotomy undertaken in acute hospitals may also be delivered in CDCs where this is more convenient for patients.
9. Systems must ensure their CDCs contribute to meeting the six primary aims of the CDC Programme, and related cross-cutting aims:



10. CDCs must add local diagnostic capacity and support the delivery of wider strategic developments, including relevant local and national programmes (eg Elective Recovery, Outpatient Transformation Programme, Hospital Infrastructure Programme).
11. CDCs should aim to provide services for at least 12 hours a day, seven days a week. Systems should ensure that they have plans in place to support their CDCs to achieve this requirement.
12. Regional and local ownership of CDCs is vital to their success. Systems must ensure that while adhering to the principles outlined in this guidance, CDC design and implementation are tailored to local population needs and adapted to meet local system requirements. Appropriate engagement of all key stakeholders is essential in this regard.

4. What has been delivered so far?

1. The 2021 Spending Review announced £2.3 billion of capital funding to transform diagnostic services over a three-year period; this is additional to funding committed to support the NHS to recover from the COVID-19 pandemic and reduce backlogs, which includes support for diagnostic services.⁴
2. In the first 12 months of the programme 77 standard and large CDCs (including associated CDC ‘spokes’) became operational, through a combination of early adopter and Year 1 sites. Both have mobilised at pace but we recognise that further work is required to develop them into fully-fledged CDCs with all required permanently sited modalities, as well as to bring new sites onboard. Rollout across the country is planned to continue at pace from 2022/23 (Year 2) onwards.
3. During 2021/22 NHS England and NHS Improvement set up the national CDC Programme within their wider diagnostic portfolio. This supports systems in developing implementation plans for CDCs and has developed a provider framework to support commissioners.

⁴ [40 community diagnostic centres launching across England - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/40-community-diagnostic-centres-launching-across-england)

4. Key metrics for measuring performance and programme success, including expected benefits, will be co-created with NHS regions and systems over the course of Year 2, along with an associated reporting framework.
5. Information on utilisation rates for key diagnostic tests is given in Appendix C.
6. We carried out a detailed review of six early implementer sites to identify key learning and best practice for the wider rollout. Appendix D gives our full list of recommendations.

5. Implementing CDCs: Key guidance, learning and best practice

5.1 Commissioning and service models

1. Systems are required to commission their CDCs using the NHS Standard Contract. This also applies to any sub-contracting arrangements. However, systems are free to select the most appropriate commissioning and contracting model to meet local needs (see Appendix E).
2. Systems must take the lead in deciding what CDCs are likely to be most beneficial in their area, and in identifying suitable provider arrangements (including host providers). ([Case study 1](#) describes how a CDC was built in partnership with the private sector.)
3. NHS England and NHS Improvement have developed a national CDC framework of pre-qualified providers of CDC services (covering imaging, endoscopy, physiological measurement and pathology). Commissioners may draw down services from the framework, whether end to end (all modalities) or just one.
4. The framework went live on 13 December 2021 with over 50 organisations placed on it. Commissioners can access the database via a dedicated [portal](#), where they will also find a buyer's guide to support them in drawing down the most appropriate services to meet local need. All services should be commissioned in

conjunction with local NHS providers so there is no drain on NHS staff and all staff are trained and work to the appropriate standards.

5.2 Governance and engagement

5. We recommend that governance arrangements for CDCs reflect the arrangements of the host organisation, co-ordinating this with other partners where appropriate. CDCs must comply with all relevant frameworks, policies and procedures. CDCs must be Care Quality Commission (CQC) registered and meet accredited standards for their pathways, within the first two years. ([Case study 2](#) describes how two organisations have worked together to deliver a CDC.)
6. Learning from early adopters highlights the importance for robust implementation of collaboration between providers and wider stakeholders (particularly primary care and local authorities). Systems must engage with a full range of stakeholders when developing their CDC plans – including, but not necessarily limited to, clinical, operational, managerial and digital leads (as appropriate) in primary care, secondary care and community services; diagnostic networks (including local imaging and pathology networks); cancer alliances; local clinical networks; commissioning leads; local authorities; other local non-NHS providers; local Healthwatch and similar groups, relevant community and advocacy groups and third sector organisations; MPs and local councillors. ([Case study 3](#) gives an example of engaging with system stakeholders to design a CDC.)
7. Systems are encouraged to engage with other sites, both locally and nationally, to share learning where appropriate. Regions are requested to consider how they can facilitate sharing of learning and best practice.
8. Effective patient and public engagement is also essential in ensuring that CDCs and associated pathways and services meet local needs. Systems are asked to give appropriate thought and regard to how they best involve local patients and the public in selecting the site for, and design and implementation of CDCs. In particular, systems must carefully consider how they can most effectively engage with underserved and hard-to-reach communities. ([Case study 4](#) gives an example of working with patients to design a CDC.)

5.3 Estates

9. In developing their plans for CDCs, systems are asked to carry out appropriate estates modelling, including around site selection and procurement of diagnostic equipment, to ensure that CDCs can demonstrate their proof of concept and meet their primary aims.
10. In carrying out their modelling and planning, systems are advised to use all available relevant demographic, clinical, demand and capacity data, information and tools to ensure that their strategic planning is robust and evidence-based. For example, systems should consider using the online [Strategic Health Asset Planning and Evaluation \(SHAPE\) Place Atlas](#) maintained by the Office for Health Improvement and Disparities. ([Case study 5](#) provides an example of modelling current diagnostic capacity and from this forecasting likely demand year on year.)
11. Systems must ensure that their CDC plans (including local estates strategy and site selection) fully align with those for other relevant facilities supporting elective recovery, such as surgical hubs, women's health hubs, eye care centres, Cavell centres and the Hospital Improvement Programme, to deliver an integrated approach to elective recovery across the system.
12. CDCs are best located where they can be easily accessed: good public transport links; sufficient car parking for patients, carers and staff; and accessible for extended hours (that is, 12–14 hours a day, seven days a week). Buildings must meet all applicable standards.
13. In choosing locations, systems must also consider how their choice contributes to the NHS Net Zero agenda. The report [Delivering a 'Net Zero' National Health Service](#) covers the interventions required to achieve that ambition.
14. Site selection should be driven by local population health needs, not other considerations such as where existing capacity or equipment is located, except where doing so aligns with wider strategic consideration. ([Case study 6](#) describes the repurposing of a decommissioned Nightingale hospital.)
15. When developing any CDC 'spoke' sites, it is important to note that a 'spoke' must be a fixed location that has a postcode and can be a 'named' designation. This means a spoke could include a 'pad' for a mobile unit that has water and power

and this site provides designated activity at regular times alongside other core CDC tests performed in that location..

16. 'Spokes' can be located on existing NHS sites **other than acute hospital sites**; as well as independent sector or commercial sites.
17. When considering location of any 'spoke' site, systems must consider the 'spokes' ongoing resource implications. If after Year 4 of the CDC Programme the proposed 'spoke' site would not be cost neutral based on a devised CDC tariff (while this is not fully in place, the average costs per test as per the Year 2 agreement with systems can be used to estimate this), this must be carefully considered as systems will be expected to maintain these sites that were supported with capital funding through the CDC Programme. Each spoke site must have at least one core imaging modality in place and further diagnostic tests delivered on that site.
18. CDCs must comply with all relevant infection prevention and control (IPC) policies, procedures and guidance; including those relating to COVID-19.

5.4 Digital infrastructure and connectivity

19. The success of CDCs is dependent on the digital connectivity between diagnostic IT systems and organisations across health systems to allow the appropriate sharing of information.
20. Systems are required to assure themselves that all local CDC providers have appropriate systems and processes in place to record and share information, including in anonymised and aggregated forms where appropriate. To support appropriate access to and sharing of data, the validated NHS number must be used for patient identification, including for all (clinical) data transfers and communications.
21. Systems may choose to use existing digital and IT infrastructure but should exercise caution in developing short-term data sharing and interoperability solutions at the expense of long-term compatibility. Systems must work towards implementing unified solutions that allow centralised CDC booking and image sharing, as well as offering a more personalised experience for the patient and enabling easier co-ordination of tests. In developing digital infrastructure, systems must have regard for the NHS [What Good Looks Like framework](#).

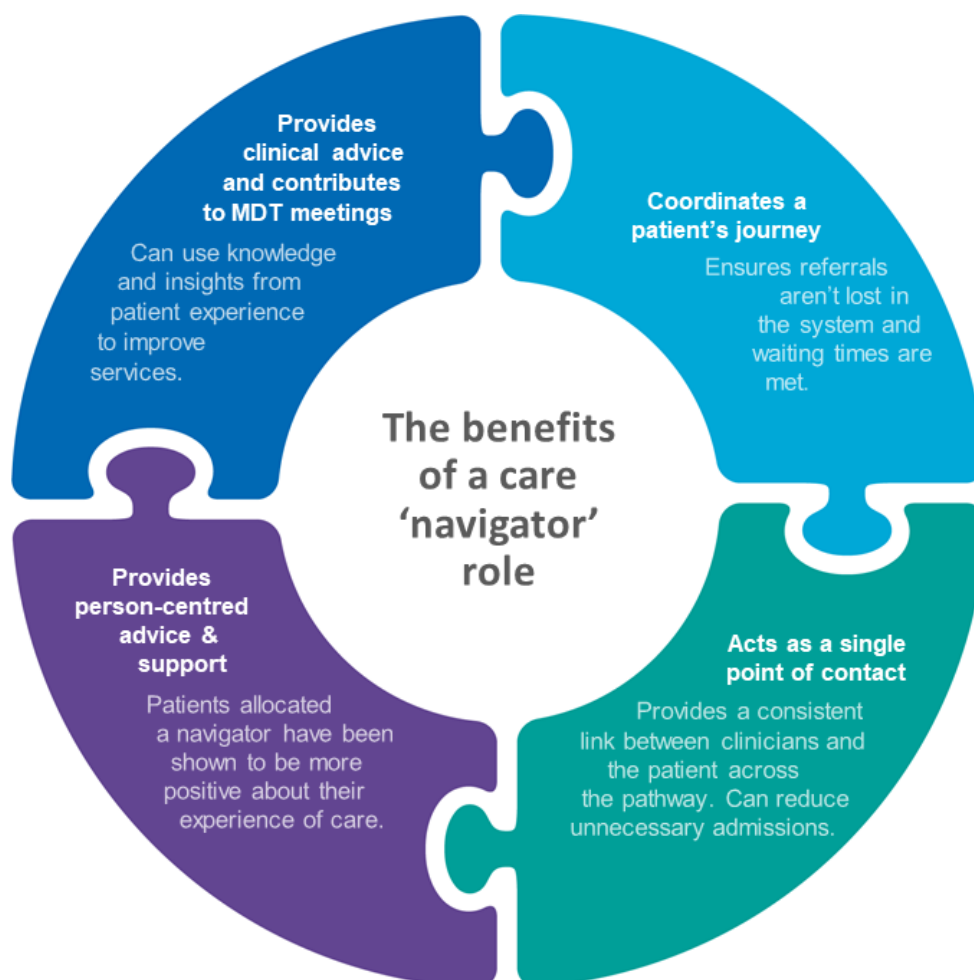
22. Systems are required to engage with relevant local networks (including imaging and pathology networks, and endoscopy and cardio-respiratory networks once established) to support data sharing. Learning from early adopters suggests these networks can effectively support image sharing and reporting, including the development of interoperable systems.
23. Systems are asked to consider how they can best use CDCs to drive system-wide digital interoperability. Early adopters suggest CDCs can be an effective test bed for interoperability programmes.

5.5 Workforce

24. Systems are required to work with partners and NHS regions to ensure co-ordinated workforce planning, including the modelling of workforce needs (both clinical and non-clinical) across the system. We recommend this includes engaging with relevant system and provider boards and networks to agree system priorities in relation to diagnostic services, including the use of any shared staffing models. The local CDC workforce should reflect the diversity of the population it serves. ([Case study 7](#) describes an example approach to workforce modelling, and [case study 8](#) to pay harmonisation.)
25. CDCs must provide appropriate staff training and continuous development opportunities, co-ordinated at a regional or system level to achieve consistent standards. This should include building appropriate links with local higher education organisations. We recommend that staff based in CDCs rotate across the system between community and acute sites (including independent sector services); for example, through workforce sharing agreements, secondments, digital staff passporting or joint staff banks.
26. In developing their workforce, systems are asked to consider how they can use apprenticeships to support staff recruitment and retention. We recommend that systems and NHS regions work together and with local educational institutions to develop apprenticeship programmes, making use of the Apprenticeship Levy held by trusts where appropriate.
27. Learning from early adopter sites suggests that developing appropriate skill mix approaches and shared staffing models can be helpful in addressing staffing issues. Systems are encouraged to develop the skill mix required to deliver the

range of CDC services safely, effectively and efficiently. This may involve the development of new (competency-based) roles as well as providing existing and new diagnostics staff with opportunities to upskill.

28. Systems may wish to consider using a navigator role to support patients through appropriate pathways. This role can support effective co-ordination of the patient's journey, and act as a single point of contact for patients to help them access the right services and support at the right time.



29. With Health Education England (HEE) we are setting up a CDC Workforce Group to support systems with CDC workforce matters. A detailed work programme is currently being developed, including workstreams on recruitment and retention, training and skills, skill mix, technology, culture and leadership, and the other aspects captured in Table 2 below

Table 2: CDC workforce programme

More people...	Recruitment/supply	Improving our ability to attract and source staff, especially into the most critical roles/gaps
	Retention	Addressing the levers and drivers of retention, including specifics for key staff cohorts (eg newly joining HCSWs, pensions for 50+)
	Attendance	Addressing the drivers and root causes of sickness absence, including stress/anxiety and policy levers (eg Long COVID)
	Reward/T&Cs	Aligning incentives to encourage staff to work more flexibly and in ways that meet changing patient demand
	Outsourcing	Exploring all options to access workforce capacity beyond the NHS, such as independent sector and non-NHS employed people
....working differently...	Training/skills	Investing in upskilling the existing workforce rapidly as well as the longer term training pipeline managed by HEE
	Standards/skills mix	Changing and matching skill mix to patient needs, eg theatre staffing, anaesthetic cover, including fully using existing skills
	Pathways/practice	Redesigning end-to-end pathways to simplify things for patients and apply a competency-based model to workforce redesign
	Digital/technology	Investing in and leveraging digital technology to enable changes in models of care and workforce redesign, eg diagnosis, virtual wards
	Deployment	Deploying our staff more flexibly in response to needs, including across organisational boundaries within integrated care systems (ICSs)
...in a compassionate inclusive culture	Culture	Focusing on staff engagement and morale as a driver and enabler of frontline innovation and productive working
	Leadership	Equipping leaders to bring about these changes, promoting a compassionate and inclusive culture and a hopeful narrative

5.6 Health inequalities

30. A core benefit of CDCs is to reduce the health inequalities across local populations that are driven by unwarranted variation in referrals, access, uptake, experience and outcomes of diagnostic provision. In implementing CDCs, systems must focus on ensuring equitable access, excellent experience and optimal outcomes for all patients.
31. Systems must ensure that their plans for CDCs include a focus on reducing health inequalities by undertaking estates modelling based on population demand and needs, and involving patients, service users and carers in the design of services to ensure that they reflect local needs. ([Case study 9](#) describes how one CDC is tackling health inequalities.)

5.7 Data, reporting and evaluation

32. Currently the consistency and availability of reliable national data on diagnostics is often limited, and better for some areas (eg imaging) than others (eg physiological measurement). A major programme of work to improve and integrate diagnostic datasets is underway at national level to address this.
33. CDC diagnostic activity needs to be distinguishable from that undertaken at other sites, eg acute sites, and divided between each diagnostic modality. Activity needs to be visible at a system, regional and national level. All CDCs must therefore have an ODS code that uniquely identifies them.
34. CDC sites must be able to measure and report on time taken from request of test to the performing and subsequent reporting of that test.
35. CDCs must ensure that all activity is recorded and report on this weekly, using the required portal. All CDC 'spokes' must be able to show their activity clearly separated from that of their host site. CDCs must also comply with any other agreed reporting requirements, including reporting against all nationally agreed metrics and key performance indicators (KPIs) for the programme.
36. Systems must evaluate their CDCs at appropriate intervals to understand how well they are complying with and delivering against the stated aims of the programme, including their impact and performance, and to identify areas for improvement. In

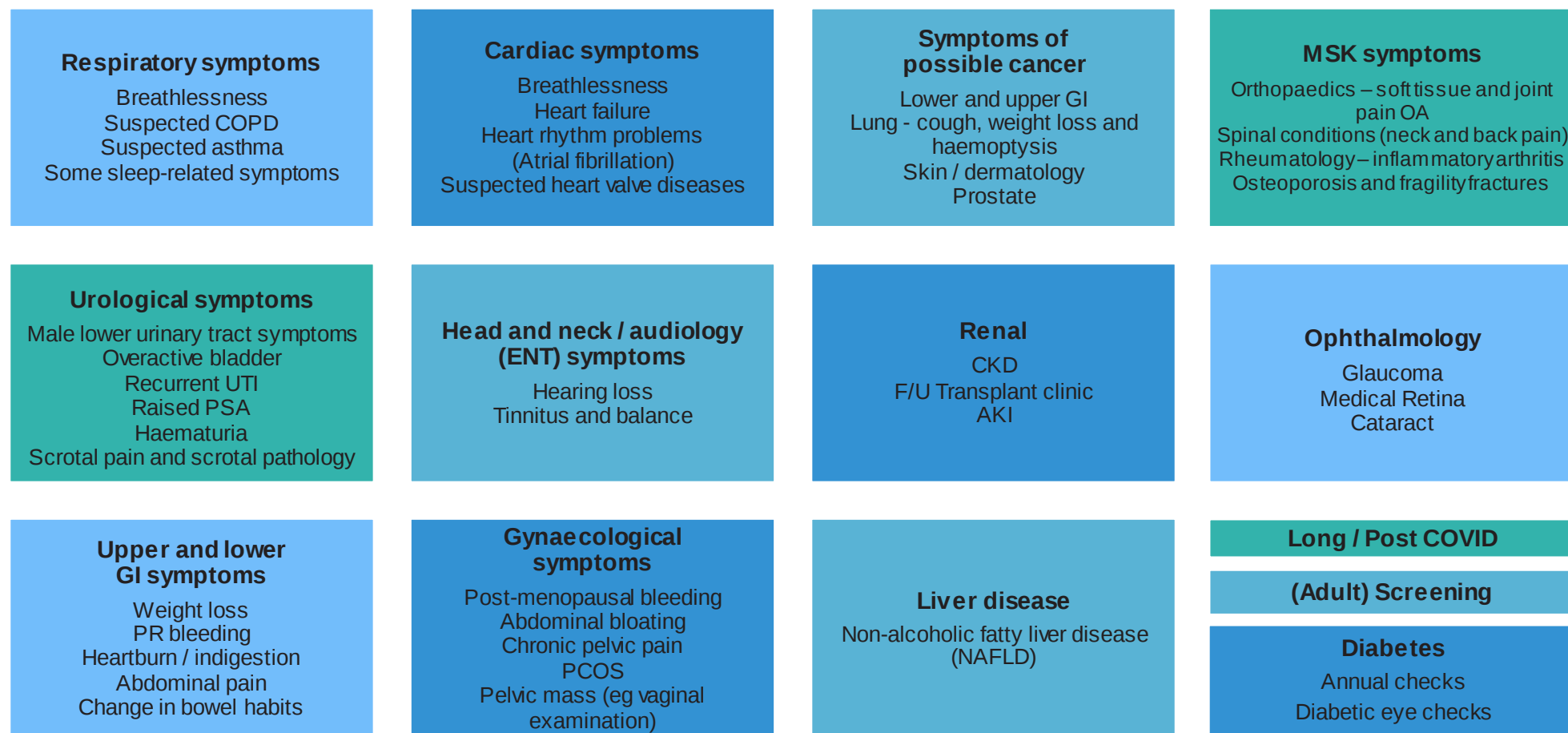
implementing CDCs, systems are required to develop appropriate and robust evaluation plans.

6. Developing clinical pathways for CDCs

1. CDCs offer the opportunity to transform pathways, ensuring that they deliver the right tests, at the right time and in the right place to inform the advice, treatment and support for each patient. Pathways should harness the latest research, digital approaches and technology.
2. Systems must align their CDC design with any pathway improvement work already underway locally (and regionally if applicable). We ask them to carefully consider if local pathways can be adopted, partially or wholly, by a CDC, and how these can be adapted to work best within a CDC context. This should include careful consideration of which local patient groups are likely to be most suitable to receive diagnostics from CDCs.
3. Learning from early adopter sites suggests that pathway redesign is most effective when integrated into the wider local CDC Programme governance structures, to ensure appropriate engagement with both operational and strategic leads during CDC delivery. We ask systems therefore to carefully consider their governance structures when setting up these programmes of work (see also Section 5.2 above).
4. We are working with national clinical directors, national specialty advisors, primary care, NHS regions and local systems, as part of the national pathways workstream, to define and recommend effective clinical and care pathways for CDCs. These will complement, not replace, existing local pathways. Input from NHS regional teams and local systems is welcomed through their respective representatives on the national workstream, to avoid duplication of effort and ensure that any pathways meet local requirements.
5. Pathways across a diverse range of specialties may be suitable for CDCs. Figure 1 below outlines symptom-based pathways appropriate to CDCs, for systems to

consider. This is by no means an exhaustive list and systems may also wish to explore and consider other potentially suitable pathways.

Figure 1: Symptom-based pathways appropriate to CDCs



6. We are prioritising the development of standardised pathways for three ‘quick win’ areas:
 - i) **Imaging requested from primary care:** A CDC could undertake most GP requested plain X-rays, ultrasound, MRI and CT scans. Full engagement with primary care will be essential before implementing this pathway, along with agreement from local commissioners.
 - ii) **Elective imaging requested from secondary care:** A CDC could undertake a significant proportion of scans requested by outpatient clinics, subject to engagement with secondary care specialists and primary care. This may also be more convenient for some patients.
 - iii) **Breathlessness and some cardiorespiratory pathways:** All standard and large CDCs will provide a range of physiological measurements for patients presenting to primary care with breathlessness. Many of these tests can potentially be done at a single visit. CDC ‘spokes’ (attached to a hub) may also provide a range of tests for breathlessness.
7. These nationally developed pathways can be adapted to meet local need and infrastructure and are intended to guide systems in the implementation of effective local pathways.
8. This work is at an early stage and further information and guidance will be published over the coming months.

7. Next steps and plan for the future

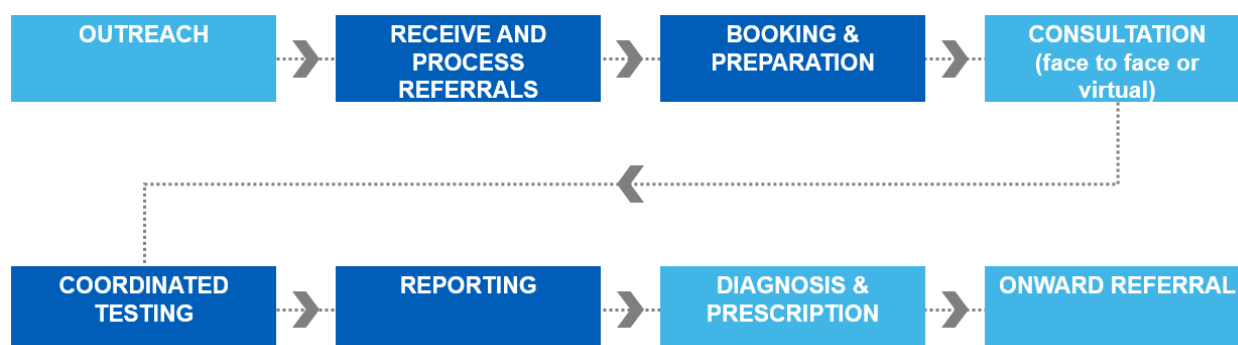
1. CDCs are a key part of transforming the way we provide elective care. Over time we expect CDCs will provide a growing proportion of elective diagnostic provision across systems and regions.
2. The timely implementation of CDCs is an essential element of the [NHS plan for tackling the COVID-19 backlog](#) announced in February 2022. Systems must consider how CDCs can best support the delivery of the national recovery plan and associated local plans.

3. Work during 2021/22 (Year 1) provided the foundation for mobilisation of the programme and implementation of early adopters and Year 1 facilities to test and refine the CDC model. We will use the learning from Year 1 to inform the priorities for Years 2 to 4 of the programme – improving patient experience and outcomes and supporting system diagnostic performance needs.
4. Focus is now on moving the CDC Programme forward through the development and rollout of Years 2 to 4 CDCs as the models for elective diagnostic provision, with each system progressing its chosen path to deliver on backlog and ongoing performance standards.
5. In Years 2 to 4 of the programme, systems should ensure that they have in place at least one standard or large CDC. In some geographies ‘spoke’ services will also bring benefits for patients, but systems are reminded that ‘spokes’ must be hosted by a standard or large CDC site – and one that the system hosts or shares the governance of.
6. Support is available from NHS England national and regional programme teams; including a range of materials and information, webinars and best practice via the FutureNHS platform.⁵ Systems are advised to access this support where needed and asked to feedback on what best supports them in achieving their ambition, through NHS regions to the national CDC implementation leads. Systems are encouraged to share their learning and best practice via local, regional and national routes; including FutureNHS.
7. National investment is planned through HEE to facilitate the training and supply of workforce to support diagnostic services in general, and the development of CDCs specifically.
8. Systems should now be developing their plans and business cases for Years 2 to 4 CDCs as part of their strategic plans for delivering diagnostic services and include evidence of impact of Year 1 investments.
9. In developing plans for CDCs, systems must take account of [the 2022/23 priorities and operational planning guidance](#), noting particularly the requirements for systems to:

⁵[FutureNHS Collaboration Platform](#)

- i) Increase diagnostic activity to a minimum of 120% of pre-pandemic levels across 2022/23.
 - ii) Develop investment plans that lay the foundations for further expansion of capacity through CDCs in 2023/24 and 2024/25.
 - iii) Develop a local system commissioning/contractual model that delivers on the performance needs of that system, and a clearly demonstrated system held demand and capacity model.
10. As per the 2022/23 planning guidance, three-year capital funding allocations will be included in system envelopes and systems will be able to access some dedicated revenue funding to support the set up and running of CDCs, subject to the necessary business case approvals.
11. Plans for Years 2 to 4 CDCs may include proposals that require greater adaptation or extension of existing facilities as well as new developments. Our ambition is to support the development of a few 'proof of concept' large model CDCs that may co-locate endoscopy with imaging services.
12. In developing proposals covering Years 2 to 4 of the programme systems must set out the number of planned CDCs, their contractual model and CDC archetype location, the expected impact on capacity, the projected costs (capital and revenue), the workforce plan, the expected benefits and how value for money will be delivered to ensure continued revenue system investment.
13. Where their plans co-locate CDCs with other facilities, such as surgical hubs, systems can supplement funding for CDCs with that from the diagnostic programme or wider NHS England elective recovery funding – for example, the use of national endoscopy funding where endoscopy provision is clearly part of the remit of a proposed large CDC.

Appendix A: CDC minimum requirements



Key:

	Service components required for all pathways
	Service component required for some pathways or optional

All CDCs must meet and deliver the following requirements as a minimum:

- **Receive and process referrals** from primary, community and secondary care. This should include the development of clear referral criteria for an agreed set of pathways and/or tests. Referrals should be considered from primary care, appropriately trained first contact practitioners, NHS screening services, paramedics, community services (such as rapid response teams), urgent treatment centres, NHS 111, A&E departments and specialist secondary care providers. Self-referral for agreed patient groups could be included where systems feel this is helpful. Systems should also consider whether children's diagnostic services can and should be provided by a CDC, going forward.
- **Book patients** in for a co-ordinated set of tests. CDCs must provide patients with the information they need to understand the diagnostic tests they have been booked in for and, in advance of attending, anything they need to do to prepare for the test. Systems should consider implementing multiple methods for booking appointments, to improve accessibility.
- Carry out **a full range of diagnostic tests** for patients in as few visits/locations as possible. The tests listed in Table 1 (Section 3) have been agreed by the national

Diagnostics Clinical Advisory Group as the set of tests that must be provided by each CDC as a minimum, but systems should not feel limited by it and may wish to consider providing other tests depending on local needs (see Appendix B).

- **Report the results** in a timely way to the referrer. CDCs must have the appropriate digital infrastructure and connectivity in place to share information and report on the outcomes of diagnostic tests and procedures to inform onward clinical care. Wherever possible, this should offer the GP advice and guidance on a management plan for the patient.
- Provide **proactive outreach** to patients, including health promotion information where this is deemed appropriate.
- Provide **virtual or face-to-face support** to a consultant specialist where this supports efficient patient pathways.
- **Communicate a diagnosis or treatment plan** to the patient, where required and appropriate, and where it is systems must ensure that appropriate wraparound patient support is available.
- Provide **onward referral** if needed as part of the patient pathway. This should be within the scope of agreed protocols and recognise that clinical responsibility for the patient journey remains with the original referring clinician. CDCs must keep the referring clinician informed where onward referrals are made.

Appendix B: Optional diagnostic tests

Suitable additional tests for CDCs

The table below identifies tests additional to the national minimum requirement that are suitable for CDC delivery, and which systems may want to consider when planning the services to include in their local CDC models. This is a non-exhaustive list. Systems are encouraged to provide additional tests from CDCs where these are deemed appropriate and a priority locally. Screening services should also be considered, if agreed locally.

Diagnostic modality	Test	
Imaging	• Mammography • DEXA scan • Dermoscopy	• Elastography (eg fibroscan) • CT colonography • Ultrasound (eg for abdominal aortic aneurysm)
Physiological measurement	• Urodynamics • Ophthalmology services	• Audiology services • Non-complex neurophysiology (eg for carpal tunnel syndrome)
Pathology	• Simple biopsies (that are outpatient in nature, eg skin and breast, and where appropriate to the pathways and services being offered) • Phlebotomy and POCT should be provided in all CDCs. Other samples can be taken on CDC sites but should be processed through existing pathology routes	
Endoscopy*	• Colon capsule endoscopy • Trans nasal endoscopy (TNE)	• Cystoscopy • Hysteroscopy • Colposcopy • Flexible cystoscopy

*Note that in planning for local endoscopy provision, consideration must be given to how services can be configured to maximise training opportunities both locally and across the region.

Tests deemed unsuitable for CDCs

National clinical advisors have identified the following tests as clinically unsuitable for delivery in a CDC. This list may be added to.

Test
Endoscopic retrograde cholangiopancreatography (ERCP)
Complex interventional procedures including biopsies of internal organs
Trans-oesophageal and stress ECHO
Bronchoscopy and endobronchial ultrasound (EBUS)
Cardiopulmonary exercise tests (CPET)
Some challenge tests
Complex sleep studies that include electroencephalography (EEG) monitoring

Possible suitable tests for CDCs by pathway

The table below identifies the potential specialties with pathways that are suitable for CDCs and the related diagnostic tests that could be provided in a CDC:

Clinical area and pathways	CDC considerations and possible tests
Respiratory	Breathlessness is a key pathway for the diagnosis of chronic respiratory conditions and heart failure and is suited to a CDC. Diagnostic tests to consider: Blood tests (NT-proBNP), ECG, spirometry, FeNO, lung volumes and gas transfer, blood gas analysis, simple field tests (eg 6-minute walk and sit to stand tests), basic sleep investigations, chest X-ray and, in some cases, CT scans. If cause of breathlessness is likely to be cardiac, ECHO.
Cardiology	Diagnostic tests to consider: ECG, echocardiogram, NT-proBNP, ultrasound, carotid Doppler test, MRI and MRA (magnetic resonance angiogram). But note that cardiac MR should be excluded due to the need for radiographers with specialist training. CT coronary angiogram (CTCA) may be considered by some larger CDCs, where it is safe and appropriate. When considering this test, systems should note the intrinsic requirements around medical staff, volume of

Clinical area and pathways	CDC considerations and possible tests
	procedures, AI digital integration, cardiac radiology reporting resource and high specification of equipment. CTCA also images the lungs and adequate provision for reporting by specialists with competency in the 2015 BTS nodule guidelines needs to be considered due to the risk factor overlap between coronary disease and lung cancer. There will also be a requirement for clinicians who are appropriately trained in ALS (advanced life support) and can administer beta-blockers; on-site facilities for resuscitation are required.
Suspected cancer and cancer-related pathways	A CDC could undertake initial tests for a range of suspected cancer (and cancer related) pathways. The exact tests will depend on which pathways are selected and what staff and facilities are available. Pathways could include breast, upper and lower GI, lung, prostate/urology, skin, gynaecology and non-specific symptoms. Diagnostic tests to consider: CT, MRI, ultrasound, X-ray, phlebotomy, point of care tests, biopsies, urine testing, gastroscopy, colonoscopy, flexi sigmoidoscopy, mammography.
Urology	Diagnostic tests to consider: MRI, ultrasound (trans-perineal, renal, scrotal, bladder), flow rate studies, urine cultures and testing, flexible cystoscopy, urodynamics and colposcopy.
Gynaecology	Diagnostic tests to consider: Colposcopy, hysteroscopy, blood tests including CA125, trans-vaginal and abdominal ultrasound and MRI.
Dermatology	Attendances at hospital dermatology clinics are among the highest of all outpatient specialties and are rising year on year. These include large numbers of patients with suspected skin cancers. Many patients could initially be assessed in a CDC with dermoscopy undertaken by trained healthcare technicians. Dermatoscopes are relatively inexpensive and space requirements are minor.
Ear, nose and throat (ENT)/audiology	Diagnostic tests to consider: MRI, CT, hearing assessment including pure tone audiometry and tympanometry. Other potential services: Hearing aid fitting and replacement, micro-suction of ears. Note that sound-proof booths or modular rooms may be required as well as an outpatient microscope and endoscopes.
Ophthalmology	Ophthalmology diagnostics should be considered for CDC inclusion to help with the system requirement to meet demand and capacity gaps, support

Clinical area and pathways	CDC considerations and possible tests
	the innovation of patient pathways, improve patient experience and reduce the footfall into Hospital Eye Service outpatients through facilitating high flow data capture for virtual review clinics. Diagnostic tests to consider: Include (but are not limited to): visual fields, visual acuity, OCT scans, retinal photography (routine and wide field), intraocular pressure and slit lamp assessments.
Musculoskeletal conditions	Diagnostic tests to consider: Blend of non-complex and complex imaging procedures, including X-ray, MRI, CT, ultrasound, DEXA scanner and basic neurophysiological tests, eg carpal tunnel.
Post COVID syndrome	Diagnostic tests to consider: Investigations should be tailored to the specific patient symptoms but may include blood tests, which may include kidney and liver function tests, C-reactive protein, ferritin, NT-proBNP and thyroid function tests. It may also be appropriate to offer chest X-ray, spirometry, lung volumes and gas transfer, and simple field tests (eg 6-minute walk, sit to stand). Formal exercise tests to provoke a problem are not appropriate in CDCs. Note that as information on Long/post COVID is still emerging, systems should ensure diagnostic test provision aligns with emerging best practice.
Health check and screening services	Systems should consider the role CDCs can play in increasing NHS health check and NHS screening programme capacity, and how CDCs can effectively work with commissioners and providers of screening services. NHS screening programmes that can be considered include: Diabetic eye screening: From the age of 12, all people with diabetes are offered an annual diabetic eye test to check for early signs of diabetic retinopathy. Cervical screening: Offered to women aged 25 to 64: every 3 years for those aged 26 to 49, and every 5 years from 50 to 64. Breast screening: Offered to women aged 50 to 70. Women over 70 can self-refer. Abdominal aortic aneurysm (AAA) screening: Offered to men in their 65th year. Men over 65 can self-refer.
Paediatrics	Provision of paediatric services for children aged 6 years and above may be appropriate. For example, CDCs may be able to support simple physiology pathways for asthma and audiology. Systems should explore how paediatric services could be offered locally within CDCs, where it is

Clinical area and pathways	CDC considerations and possible tests
	safe and appropriate to do so. Systems must also ensure that all relevant governance and safeguarding arrangements for children are in place and that all relevant policies, processes and procedures are complied with.

Please note that work is underway to identify and work up other possible pathways, including diabetes and liver disease.

Appendix C: Utilisation rates for key diagnostic tests

CDCs should ensure that they achieve appropriate utilisation rates for the diagnostic tests they perform, to maintain throughput and ensure efficiency. The table below outlines expected utilisation rates for several core diagnostic tests, as agreed with the relevant national clinical advisors. The ranges accommodate differences across CDCs, service types and referral groups.

Test	Utilisation rates
MRI	2–3 scans per hour
CT	3–4 scans per hour
Ultrasound	3 scans per hour
Endoscopy	10 points per service list; 8 points per training list
Echo	1 scan (including reporting) per 45 minutes

Appendix D: Implementing community diagnostic centres – recommendations from detailed analysis

Theme	Recommendation		National	Regional	System	Site
Service model	1.	The CDC Programme team should provide guidance on the design of CDC referral pathways to encourage a greater interface with primary care.	✓		✓	
	2.	The CDC Programme team should provide greater clarity on the appropriate patient complexity and cohort CDCs should manage.	✓			
Workforce	3.	The Diagnostic Policy team should continue to work with HEE, NHS Digital, higher education institutions, professional bodies and DHSC to implement recommendations 12–18 in the Richards' Review relating to workforce expansion and training opportunities across the imaging, endoscopy, cardiorespiratory, pathology and genomic workforce.	✓			
	4.	The CDC Programme team and regions should promote the use of the apprentice levy and identify issues regarding entry requirements for apprenticeship programmes to ensure that CDCs make the most effective use of these schemes.	✓	✓		

Theme	Recommendation		National	Regional	System	Site
	5.	The CDC Programme team should regularly identify and share examples of good practice that sites and/or systems have followed to overcome workforce challenges.	✓			
	6.	CDCs should consider use of a navigator role, such as a clinical nurse specialist or equivalent, to support patients through the appropriate pathways.				✓
	7.	System and trust leaders, and the leaders of relevant networks, should agree system priorities in relation to diagnostic services, including any use of shared staffing models. Where priorities have been agreed, NHS regions should ensure trusts collaborate to achieve aims.		✓	✓	
Estates and equipment	8.	Future sites and the CDC Programme team should ensure there is sufficient time for widespread engagement and detailed modelling, without which it will be a challenge for CDCs to demonstrate their proof of concept and meet their primary aims.	✓		✓	✓
	9.	The Diagnostic Policy team should explore issues relating to the procurement of equipment to better understand whether there is a gap between forecasted demand and supply of equipment.	✓			
	10.	Sites, with the support of the CDC Programme team, should explicitly consider how the location of the site contributes to the NHS Net Zero agenda.	✓		✓	✓

Theme	Recommendation		National	Regional	System	Site
	11.	Working with the Royal College of Radiologists and Society of Radiographers, the CDC Programme team should develop a national clinical standard for resuscitation support which includes guidance on how to apply this in deciding site location.	✓			
	12.	Local system leads should support sites to build staff confidence in resuscitation, such as by regularly rotating staff between the CDC and local acute sites to give them the opportunity to shadow resuscitation teams.			✓	
Digital connectivity	13.	The CDC Programme team and NHS regions should identify which of the existing system-led strategic digital connectivity programmes CDCs could benefit from, to support wider system working and long-term interoperability.	✓	✓	✓	
Governance	14.	The CDC Programme team should regularly identify and share examples of good practice governance structures that sites have used.	✓			
	15.	The CDC Programme team should ensure that sites are comprehensively engaging with primary care and local authorities, and share good practice examples of engagement that sites have undertaken.	✓			
Health inequalities	16.	NHS national and regional teams, systems and sites should ensure that future waves of CDC implementation have a renewed focus on health inequalities to help reduce these across our health systems. For example, NHS national and regional teams could set out an evaluation framework that includes a section on health inequalities metrics.	✓	✓	✓	✓

Theme	Recommendation		National	Regional	System	Site
Evaluation and ongoing learning	17.	The CDC Programme team and Diagnostics Policy team should develop a framework for evaluation.	✓			
	18.	To support CDC evaluation, the CDC Programme team and Diagnostics Policy team should review diagnostics data collection to effectively identify diagnostic activity levels by type and location. Additionally, data collection needs to include more robust metrics beyond DM 01 diagnostic modalities and data should be collected at all levels (regional, provider and site).	✓			
	19.	The Diagnostic Policy team should review the current process for collecting diagnostic workforce data and consider including in the dataset the WTE of all individuals working across each diagnostic modality by competency and banding – with a particular focus on attrition and sickness rates, forecasted growth assumption and observed workforce behaviours.	✓			
	20.	The CDC Programme team should establish a CDC network for both sites and systems to share learning and expertise in real time.	✓			

Appendix E: Planning and commissioning requirements

To plan for implementing and rolling out CDCs locally, NHS regions and systems are asked to work collectively to:

- Quantify, where possible, current diagnostic provision against:
 - population health outcomes related to diagnosis of conditions (eg cancer and heart disease)
 - diagnostic capacity
 - productivity and efficiency
 - workforce capacity
 - health inequalities
 - patient experience
 - integration of care.
- Analyse current and forecasted diagnostic demand and capacity taking account of estimates in the Richards' Review and other data sources such as Getting It Right First Time (GIRFT) reports, including the Gastroenterology GIRFT Programme National Specialty Report.
- Engage with stakeholders regionally and locally to gather key insights, to supplement the data available locally.
- Determine the short, medium and long-term plan for CDCs in their locality, in the context of wider diagnostic transformation plans, other NHS transformation plans, delivery of NHS Long Term Plan commitments and NHS recovery.

Suitable commissioning models could include:

- a single NHS provider
- a single independent provider
- a prime provider model
- an alliance approach.

Specialised commissioning services can be included where appropriate.

In identifying an appropriate commissioning and contracting model, systems are advised to consider the following:

- the services they plan to provide within their CDC
- activity referrals
- the local joint commissioning strategy
- local workforce availability and needs
- local infrastructure and geography
- funding sources
- integration with existing service.

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