Emerging multidisciplinary diagnostic centre (MDC) models and design principles

ACE wave 2: exploring the concept of MDC-based pathways

Accelerate, Coordinate, Evaluate (ACE) Programme
An early diagnosis of cancer initiative supported by:
NHS England, Cancer Research UK and Macmillan Cancer Support
Continuing serious symptoms referred to Diagnostic Centre

The Danish 3-legged strategy is based around a system of rapid diagnostic routes for all levels of symptom severity:

**Alarm**

- An urgent referral onto specific cancer pathway for patients with alarm symptoms, similar to 2 week wait referral

**Non-specific but serious**

- An urgent referral pathway for non-specific symptoms, with an initial diagnostic filter function, and referral into a multidisciplinary diagnostic centre where necessary

**Low risk, but not no risk**

- GP direct access to fast diagnostic investigations, with the patient not admitted to hospital

The ACE Programme is piloting MDC-based approaches for patients with non-specific but concerning symptoms that could be indicative of cancer. These pilots are being developed within the wider cancer services framework in England, including urgent referral for suspected cancer (2 week wait).

Therefore, pilot sites are essentially developing and evaluating models reflective of the middle strand of the Danish model (blue). The following emerging models should be viewed in this context.
Patient presents to GP with non-specific but concerning symptoms

Initial filter tests (bloods; CXR; urine)

Comprehensive CNS assessment & triage

Diagnostic tests based on patient needs / risk

Cancer diagnosed
Cancer ruled out
‘All clear’ given

Further MDC diagnostic tests

Appropriate cancer pathway
Onward referral from MDC
Return to GP

Key design principles: cancer diagnostic service

Approach

- Patient care is actively co-ordinated by CNS / Navigator from referral to diagnosis
- MDC triage is based on a comprehensive initial CNS assessment of patient needs / history

Diagnostics

- MDC diagnostic activity specifically focused on patients with continuing suspicion of cancer
- Initial MDC diagnostic imaging determined by comprehensive CNS assessment of patient need
- Patients referred out of MDC when / if cancer is ruled out

Leadership

- Rapid diagnostic [hot] reporting secured through prioritisation of close multi-team working
- MDC approach founded on effective engagement with local clinical and non-clinical services/support
Patient presents to GP with non-specific but concerning symptoms

[Low Dose] CT Scan (unless medically unsuitied), bloods & FIT

Clear cancer diagnosed
Unexplained serious symptoms persist
Other condition diagnosed

Further diagnostic tests in MDC

Patient diagnosed

Appropriate cancer pathway
Return to GP
Appropriate treatment pathway

**Key design principles: Y/N cancer diagnostic service**

**Approach**
- Patient care is actively co-ordinated / tracked by a Clinical Navigator (Radiographer) / CNS from referral to cancer diagnosis / onward referral
- Referral into MDC is triggered at point of initial test request

**Diagnostics**
- All patients presenting with vague symptoms undergo diagnostic imaging as part of initial stage of pathway
- 1st diagnostic test is CT Scan by default (unless patient is medically unsuitable), bloods & FIT
- Initial diagnostic filter provides a rapid Yes/No diagnosis for cancer
- All remaining patients with [undiagnosed] vague symptoms automatically referred onto MDC

**Leadership**
- Clinical responsibility for the patient mirrors the patient journey (GP>Navigator>MDC Clinician)
Patient care is actively coordinated/tracked by MDC Coordinator from referral to diagnosis.

Patient care is planned and provided in a rapid, non-emergency clinical environment.

MDC triage is based on a comprehensive initial CNS assessment of patient needs/history.

The MDC diagnostic testing threshold is set for those with unexplained need/high identified risk.

The MDC provides a broad & rapid diagnostic pathway for all patients with vague symptoms, including both cancer & other serious conditions.

Patients with lower risk and/or explainable symptoms are monitored and reviewed to ensure effective patient safety netting.

Key design principles: broad diagnostic service

- The MDC diagnostic testing threshold is set for those with unexplained testing needs/high identified risk.
- The MDC provides a broad & rapid diagnostic pathway for all patients with vague symptoms, including both cancer & other serious conditions.
- Patients with lower risk and/or explainable symptoms are monitored and reviewed to ensure effective patient safety netting.
- The MDC retains clinical responsibility until point of patient diagnosis [or transfer back to Primary Care].
- MDC clinical leadership is collaborative and risk aware.
<table>
<thead>
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<th>Key design principles: overarching features of a MDC pathway (ACE Programme)</th>
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<tr>
<td><strong>Approach</strong></td>
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<td>• Patient care is provided in a rapid, safe and planned way that avoids emergency healthcare routes</td>
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<td>• Patients are actively managed through the system by a lead member of staff</td>
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<td>• The MDC approach complements and supports existing clinical pathways and services</td>
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<td><strong>Diagnostics</strong></td>
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<td>• The MDC provides rapid diagnostic testing to rule cancer in or out for all patients with non-specific but concerning symptoms</td>
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<td>• Diagnostic decision making is based on a clear assessment of patient needs</td>
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<td>• The MDC is comprised of, or has direct access to, a broad range of clinical expertise</td>
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<td><strong>Leadership</strong></td>
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<td>• MDC clinical leadership is visible, proactive &amp; committed to influencing local healthcare systems</td>
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<td>• The MDC champions a whole-system approach to the management of non-specific but concerning symptoms by developing effective relationships that support fast, responsive access to diagnostics, facilities and clinical expertise</td>
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The configuration of the MDC model may need to be adapted to reflect the local healthcare environment:

- **Physical**: MDC may be based around a collection of services/facilities in one location
- **Virtual**: MDC may need to be based across a conceptual network of services/facilities
- **Composite**: MDC may be centralised around a single location, but with key elements conducted remotely

The MDC model may need to be adjusted to reflect local diagnostic capacity and resources:

- **One stop shop**: The intention is for MDC diagnostics to be based in a single location and conducted on a single visit. However, where it is necessary for diagnostics to be conducted over a number of days/visits, this should happen as quickly as possible.

  **A time limit for the process will be qualified as part of the ACE Programme evaluation.**

As part of its development, the MDC should consider the impact of the physical environment on patient experience:

- What facilities are available for patients potentially waiting for extended periods of time?
- What is the MDC environment like and what is the likely impact on patient experience?
- How does the configuration of the model, and the sequencing of diagnostic testing, impact on the patient?
The information in this pack should be used in conjunction with wider programme information available in the ACE MDC resource pack.

To request a copy of the ACE MDC resource pack please email ACEteam@cancer.org.uk