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

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 multi-disciplinary 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

- Not applicable to Cancer Waiting Time Standards

- Appropriate cancer pathway
- Onward referral from MDC
- Return to GP

#1 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 unsuit), 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

#2 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 co-ordinated/tracked by MDC Co-ordinator 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 retains clinical responsibility until point of patient diagnosis [or transfer back to Primary Care]
- MDC clinical leadership is collaborative and risk aware
### MDC high-level design features

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<th>Category</th>
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| **Symptom based**             | • Planned referral for complex patients with non-specific but concerning symptoms  
                                 | • Urgent pathway for patients whose symptoms don’t indicate a clear referral route                                                   |
| **General diagnostic pathway**| • 1º care access to filter function tests supports appropriate referrals into the MDC  
                                 | • MDC diagnostic utility across a broad range of cancer & non-cancer conditions                                                       |
| **Rapid & multidisciplinary**  | • Diagnostic tests & reporting in quick succession, based on patients’ needs  
                                 | • Enhanced clinical collaboration across 1º & 2º care boundaries                                                                      |
| **Patient centred**           | • Patient supported through process from referral > diagnosis & onwards  
                                 | • MDC responsibility until point of diagnosis or exclusion of serious disease                                                           |