The NCDA is a partnership project led by Cancer Research UK in collaboration with Public Health England, NHS England, NHS Scotland, Public Health Wales, the RCGP and Macmillan Cancer Support
AUDIT DATA COLLECTION (2014 NCDA)

• Participation in the audit was voluntary
• In England and North Wales data were collected from GP practices via an online portal
• In Scotland data were collected on Excel spreadsheets

• Data were collected between September 2016 and February 2017 in England
• All malignant cancer diagnoses in 2014 were in scope of the audit (except diagnoses of non-melanoma skin cancer)
• English practices received £10 per completed patient record if they submitted data on ≥95% of cancer patients on their NCDA practice list
AUDIT SUMMARY - ENGLAND

The NCDA combined primary care data with data from the Cancer Registry for patients diagnosed with cancer in 2014 across England to understand pathways to cancer diagnosis.

439 practices from 139 CCGs took part in the England audit (this is 5.4% of all practices in England).

17,042 patient records were collected (this is 5.7% of all patients diagnosed with cancer in 2014).
NATIONAL CANCER DIAGNOSIS AUDIT

PARTICIPATION BY CLINICAL COMMISSIONING GROUP (CCG)

The National Cancer Diagnosis Audit (NCDA) gathered primary and secondary care data for patients diagnosed with cancer in 2014 to better understand patient pathways to diagnosis and, ultimately, improve clinical care and early diagnosis of cancer. CCGs were encouraged to support practices to take part, and a total of 439 GP practices from across England submitted data to the audit. Participation varied across CCGs.

PROPORTION OF PRACTICES WITHIN A CCG THAT TOOK PART IN THE NCDA.

- 0%
- 1-4%
- 5-9%
- 10-14%
- 15-19%
- 20-24%
- 25-50%
- >50%

CAVEAT:
Participation in the NCDA was not mandatory. Some CCGs offered incentive schemes for participation in the audit. All practices that submitted data to the audit, regardless of the volume or completeness of data, were included in this infographic.

SOURCE: National Cancer Diagnosis Audit 2014
Data from the NCDA were representative of the national cancer incidence for 2014

*From Cancer Research UK cancer incidence statistics for 2014
STAGE DISTRIBUTION

Stage distribution in the NCDA mapped onto national data on cancer stage distribution from 2010-14*

- Early stage (0, 1 or 2): 42% in NCDA, 41% from NCIN 2010-2014
- Late stage (3 or 4): 35% in NCDA, 34% from NCIN 2010-2014
- Not known: 23% in NCDA, 24% from NCIN 2010-2014

*From National Cancer Intelligence Network (NCIN)
COMPARISON TO EARLIER DATA

• The 1st National Audit of Cancer Diagnosis in Primary Care (NACDPC) in England, 2009/10, collected data on **18,879 patients** from **1,170 general practices**

• Note: Data items captured in the NACDPC and analyses of indicators based on these data did not map exactly onto the NCDA; to allow comparisons, adjustments had to be made to some of the NCDA data

• Median primary care interval was 5 days for patients included in the NACDPC and 4 days for patients included in the NCDA, based on 18 cancer types\(^1\)

• 15% of NACDPC patients and 20% of NCDA patients had 3+ consultations prior to referral\(^2\)

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\(^1\)Based on 18 cancer types only to make comparable to findings reported in Lyratzopoulos et al. BJC 2013 108:686-690

\(^2\)NCDA denominator included ‘zero’ consultations and the ‘not known’ category for all non-screening detected patients
AUDIT OBJECTIVES

• The NCDA seeks to gather data about pathways to cancer diagnosis, incl.:
  • Interval length and number of consultations in primary care
  • Use of investigations prior to referral
  • Referral pathways for patients with cancer

• The last round of the NCDA collected data on patients diagnosed in 2014

• The 2014 audit data together with follow-up data from future audits will:
  • Help to understand changes in patterns of cancer diagnosis for all cancer types, following changes in Cancer Referral Guidelines
  • Help with assessing the impact of new guidelines

1NG 12 Cancer Referral Guidelines (NICE) / Scottish referral guidelines for suspected cancer
KEY FINDINGS - ENGLAND

• Data were representative of the national cancer incidence for 2014
• 76% of patients had at least one co-morbidity
• Most patients (72%) first presented at the GP surgery (or had a home visit)
• 74% of patients were referred to a specialist after only one or two consultations; approximately 52% were referred through the Two Week Wait route
• Primary care led investigations before referral were used in 45% of all patients
• For 44% of patients, there was evidence in the clinical record that safety netting had been used
• For one in five patients the GP considered there to have been an avoidable delay in the patient receiving their diagnosis

Swann et al. BJGP 2018: https://doi.org/10.3399/bjgp17X694169
Three quarters of patients had at least one co-morbidity. Multi-morbidity burden was high (45.5%).
Most patients (72%) first presented at the GP surgery (or had a home visit) with symptoms deemed to be relevant to the subsequent diagnosis of cancer.
TYPE OF REFERRAL

More than half of patients diagnosed with cancer were referred via the two week wait (TWW) route.
## EMERGENCY DIAGNOSES

<table>
<thead>
<tr>
<th>Route to diagnosis (emergency)</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient self-referred – no prior consultation</td>
<td>4.2%</td>
</tr>
<tr>
<td>Referred as emergency by GP – no prior consultation</td>
<td>3.2%</td>
</tr>
<tr>
<td>Patient self-referred – while awaiting tests/referral</td>
<td>1.8%</td>
</tr>
<tr>
<td>Referred as emergency by GP – while awaiting tests/referral</td>
<td>1.4%</td>
</tr>
<tr>
<td>Patient self-referred – previously seen in same episode</td>
<td>1.7%</td>
</tr>
<tr>
<td>Referred as emergency by GP – previously seen in same episode</td>
<td>3.0%</td>
</tr>
<tr>
<td>Other emergency route(s)</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

*0.5% of patients (n=81) were diagnosed through an unknown emergency route

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**Diagram:**
- Emergency: 16.5%*  
- Routine: 7.9%  
- Screening: 7.3%  
- Urgent: 4.4%  
- To private care: 1.8%  
- Other: 5.9%  
- Not known: 4.4%  
- TWW: 51.8%

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AVOIDABLE DELAYS

For one in five patients the GP considered there to have been an avoidable delay in the patient receiving their diagnosis.

Delays could occur anywhere along the pathway:

- 12.7% occurred pre-consultation
- 49.1% occurred in primary care
- 38.2% occurred in secondary/tertiary care

[Diagram showing top three causes of avoidable delays: Health Professional (28%), Hospital (27.1%), Patient (25.7%)]

[Diagram showing other causes: Cancer signs & symptoms (11.9%), Primary care system (6.8%), Specialist hospitals (0.6%), Other (4.9%)]

A partnership with:

Public Health England
NHS England
NHS Scotland
GIG CYMRU
Public Health Wales
RCGP
Royal College of General Practitioners
We Are Macmillan Cancer Support
Cancer Research UK
BENEFITS FOR PRACTICES

• Highlighting good practice
• Highlighting diagnostic challenges
• Identifying cases for review, reflection and learning
• Opportunity for case study discussion and peer review
• Enabling quality improvement activity, leading to more efficient and effective pathways to diagnosis and improved patient experience and outcomes
• Demonstrating quality improvement for GP appraisal and revalidation
• Providing evidence for CQC inspection
QUALITY IMPROVEMENT

Several GP practices made changes and undertook quality improvement activities based on audit findings.

Most QI activity focused on:
- Referral behaviours
- Safety netting protocols
- Bowel screening uptake

### Areas for QI identified from NCDA

From a follow-up survey of Cancer Research UK facilitators in Dec 2017 (n=32)

<table>
<thead>
<tr>
<th>Area identified for QI activity</th>
<th>Proportion of facilitators reporting that their practice(s) identified this area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordering of primary care-led investigations</td>
<td>3%</td>
</tr>
<tr>
<td>Continuity of care</td>
<td>13%</td>
</tr>
<tr>
<td>Co-morbidities and/or their impact</td>
<td>17%</td>
</tr>
<tr>
<td>Symptom identification</td>
<td>27%</td>
</tr>
<tr>
<td>Quality of conversation with patient</td>
<td>30%</td>
</tr>
<tr>
<td>Need to improve screening uptake</td>
<td>43%</td>
</tr>
<tr>
<td>Safety netting</td>
<td>47%</td>
</tr>
<tr>
<td>Referral practices (to secondary care)</td>
<td>50%</td>
</tr>
</tbody>
</table>
EMERGENCY DIAGNOSES MY PRACTICE

- Abdominal pain (missed Ultrasound) – Colorectal Cancer
- Abdominal pain ? UTI some diarrhoea – Colorectal Cancer
- Abdominal pain - Previously not investigated as to frail – Colorectal Cancer
- Acute renal failure – Plasma cell Leukaemia
- Abscess, histology – T cell Lymphoma
- Poor diabetic control – Pancreatic Cancer
- General deterioration – Oesophageal Cancer
EMERGENCY DIAGNOSES MY PRACTICE

• High Potassium – Lung Cancer
• High Potassium – Lymphoma
• DVT, normal CXR – Lung Cancer
• DVT, dysphagia – Oesophageal Cancer (Under haematology)
• DVT, PE, - Prostatic Cancer (Urinary symptoms –ve msu, not investigated)
• Urinary retention – TURP – Prostate Cancer
• Urinary retention – TURP – Prostate Cancer
• Chest Infection – Lung Cancer
MY PRACTICE LEARNING POINTS

• Urinary symptoms with negative MSU consider further investigations
• Head and Neck lumps, Do not arrange urgent Ultrasound arrange 2 week referral
• Normal tests do not mean no cancer
• Safety netting
• Use of advice and guidance for patients not meeting NICE 2 week rule criteria
CCG LEARNING

Three or more consultations

Less than three consultations

A partnership with:
GP FEEDBACK

I found the whole process incredibly easy and very informative. The information gathered highlighted good practice and areas that require improvements to help change future practice and improve patient care.

Our audit revealed some interesting case studies and we are already starting to make changes to our practice systems.

In our audit we came across two patients who had an initial normal chest X-ray but we still referred and they were both diagnosed with lung cancer. The audit has reminded us to trust our own judgement when we need to and still refer.

When doing the audit we realised our follow-up process for abnormal blood test results could be tightened up. We’re now looking at this in our practice to see how best to approach this.
FUTURE PLANS
FUTURE PLANS

• Various in-depth research studies are planned to look at the data in more detail
• Data are available to interested research groups via the Office for Data Release

• The next audit round is currently being planned and will likely begin data collection in April 2019, collecting data on patients diagnosed in 2018 or later
• The NCDA team are implementing near real time data collection for English and Welsh GPs through the online portal using email alerts (the next audit in Scotland will again use Excel spreadsheets managed by ISD)
• Alliance and CCG reports will be provided if sufficient practices take part
• Further details about the next audit will be made available at www.cruk.org/ncda and via all partner organisations

FUTURE PLANS

The next audit will:

• Support further quality improvement activity at practice and network levels
• Provide local and regional cancer intelligence on primary care cancer pathways
• Allow assessment of the extent of NG12 implementation and its impact on cancer pathways
• Enable further pathway development
• Provide insights to help meet Cancer Waiting Times standards
OUR RATIONALE FOR INVOLVEMENT

• To support clinician reflective practice and to provide an opportunity to support continual professional development

• To gain both practice and CCG level insight into core cancer trends i.e. patient presentation trends, 2ww referrals as the main route to diagnosis, tests undertaken prior to referral, most common cancers, stage of diagnosis

• To inform CCG planning and future education and learning events
DEVELOPING AN INCENTIVISED PROCESS

At an early stage a decision was made to incentivise practice engagement in the NCDA

Core elements of the incentivisation scheme;

• 90% of cancer cases identified were audited
• Evidence that the practice’s audit outcomes were reviewed as part of a clinical team meeting/practice based education session
• Submission of the practice based learning summary and areas of service improvement (summary template provided for population)
• Practice based support was provided by the CRUK Facilitators and actively promoted within the incentivisation documentation.
Facilitator Support?

- Assisting practices to sign up to and use the audit portal (advice on the audit process)
- Assisting with data presentation and interpretation post audit
- Supporting GP reflective learning sessions
- Encouraging practices to identify future improvement plans
- Planning area wide learning event/s
OUTCOMES

In North Tyneside CCG:

• 90% of practices in the CCG (26 practices took part)

• All participating practices submitted a summary of actions in support of service improvement
1,148
MAIN CCG LEVEL FINDINGS

- 15.9% of cases reviewed were Lung Cancers – by far the most dominant cancer type across the patch (followed by breast then colorectal)
- 38.7% of cancers were diagnosed at Stages 1 and 2 – lower than the national average of 41.9%
- 63.7% of first presentations were at the GP practice – positively
- 72.1% of cases were referred after three consultations or less
- The most common route to diagnosis was 2ww referral at 36.5%, followed by GP referral and Emergency A&E
- 18.2% of diagnosis were made via emergency - the vast majority of these were classified as patient self-referral without any prior and relevant GP consultation related to that cancer
- In respect of the above the majority of these were lung cancers
- 69.7% of cases did not have an avoidable delay in the patient pathway
- There was also an evident trend of colorectal cancers diagnosed via non screening routes
POST AUDIT ACTIVITY
CCG LEVEL

• Utilised the outcomes of the audit to refresh the CCGs cancer plan
• Evidence used to inform ongoing work on lung cancer earlier diagnosis and measures to reduce smoking prevalence
• Audit has invigorated reflective practice and CCG cancer education work streams
• Assisted in developing projects as part of the Cancer Alliance ED Transformation workstreams i.e. Non Clinical Cancer Champions and Community Cancer Awareness Workers
## Practice Level Service Improvement Themes

<table>
<thead>
<tr>
<th>Practice Level Service Improvement Themes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct SEAs on those patient cases where a delay in the pathway has been identified</td>
<td>Protect Educational Time Slots – For SEA Review and Learning</td>
</tr>
<tr>
<td>Engage in Patient Cancer Symptom Awareness Campaigns for lung and colorectal cancer</td>
<td>Review management of Prostate Cancer Patients</td>
</tr>
<tr>
<td>Review the quality of practice respiratory review (COP) templates in support of clinical review – To incorporate lung cancer related questions</td>
<td>Circulate and use clinical assessment tools across practice and review safety netting practices/access training</td>
</tr>
<tr>
<td>Review management of COPD patients – considering when pt last had CXR.</td>
<td>Improve patient engagement in cancer Screening programmes – identify practice screening lead, access staff training on barriers to engagement. Develop and adopt robust DNA follow-up systems.</td>
</tr>
<tr>
<td>Proactively follow-up Bowel Screening Non Responders E.g. Flu Clinics with opportunistic engagement around bowel screening attendance (similar audience)</td>
<td>Involve PPG in cancer awareness/symptom awareness work</td>
</tr>
<tr>
<td>Target work in supporting women with LD to make informed decisions on cervical screening. Focus on screening take-up during pt annual reviews</td>
<td>Review access to HCA/Bloods when cancer suspected or needs to be ruled out. Including patient safety netting</td>
</tr>
<tr>
<td>Improve and invest time in staff VBA Smoking Training</td>
<td></td>
</tr>
</tbody>
</table>
Case study

- GP practice audited 37 patient records
- Largest proportion of cancers diagnosed were lung cancer – majority of which were late diagnosis
- Practice have adopted more proactive processes to monitor and identify higher risk patients (via respiratory reviews
- Champion more symptom awareness campaigns
- Increase stop smoking interventions – all clinical staff getting on board with VBA
KEY OUTCOMES

- High number of practices who took part in the audit which provided us with a large amount of data
- Large proportion of lung cancers detected at a late stage via emergency referral, negative impact on patient outcomes for patients
- More cancers being detected at a late stage rather than early stage (all cancers)
- Smaller but noticeable trend late stage presentation for colorectal cancers
- Positively the majority of cancers were detected by the patients first presenting to the GP practice