A rapid-access diagnostic pathway in suspected pancreatic cancer

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At a glance

Background: Pancreatic cancer is the deadliest and quickest killing common cancer. This is because pancreatic cancer is diagnosed late with over 50% diagnosed at stage 3 and stage 4, thus, very few people receive treatment - only 1 in 10 patients receive life-saving surgery and only 2 in 10 receive life-extending chemotherapy. We need more people diagnosed with pancreatic cancer earlier to give them the chance to receive better and faster treatment to survive longer and live well. This is how we will start to drive improvements in disease outcomes across the UK.

Case for change:

Many patients develop sudden-onset, painless jaundice before they receive a diagnosis of a tumour in the head of the pancreas. Anyone presenting with jaundice of this type needs urgent assessment and imaging (CT scan) to rule out cancer. It is imperative therefore, that these patients are streamed into the system for suspected pancreatic cancer and have access to a CT scan quickly, within 48 hours, rather than going through the urgent 2-week referral pathway. This will ensure they have a higher chance of having treatment such as potentially curative surgery.
Implementing the rapid access jaundice clinic: A clinical nurse specialist working in the gastroenterology department at the Royal Albert Edward Infirmary in Wigan has designed and implemented a rapid diagnostic pathway using jaundice as a marker of potential pancreatic cancer. This rapid-access jaundice pathway has been operational since March 2017.

Outcomes: Twice as many patients diagnosed with HPB cancer in the rapid access jaundice clinic were eligible for surgery when compared with cases from the year before the jaundice clinic was up and running. All patients referred to the clinic, had a CT scan and reviewed by the HPB specialist team within 48 hours. From all patients referred to the jaundice clinic, 30% (15 out of 51) were diagnosed with pancreatic cancer and of those, 7 had surgery at the regional HPB specialist centre in Manchester. The other 8 were managed by oncologists specialists. The HPB CNS discussed all people with a HPB cancer with the specialist HPB team and provided holistic physical and psychological support.

Conclusion: Diagnosing pancreatic cancer quickly, within two days from referral, using jaundice as an indicator is possible within the NHS. Patients with sudden onset, painless jaundice need to access a CT scan quickly for further investigation – as the data shows, gallstones or a mass in the pancreas are the most common diagnosis for those patients. The rapid access jaundice clinic in Wigan accelerates the clinical diagnostic tests, review and management of both operable and inoperable patients by the specialist HPB team. Therefore, patients have the opportunity to receive better and faster treatment, usually within two weeks from the CT scan. This in turn results in more patients receiving treatment such as surgery that can potentially improve long-term survival. The role of the HPB CNS to manage the pathway, coordinate care services from primary to secondary and tertiary care and to assess the physical and psychological needs of patients is pivotal to the success of this initiative.
Rapid access jaundice

Background

Pancreatic cancer is the deadliest and quickest killing common cancer. From people facing a pancreatic cancer diagnosis, 1 in 4 die within a month and 3 in 4 die within one year. Survival estimates show that less than 7% of people with pancreatic cancer survive for five years or more. This is because pancreatic cancer is diagnosed late and through emergency presentation. Over 50% are diagnosed in stage 3 and stage 4, and thus, most of the patients (7 in 10) do not receive any active treatment at all and very few receive life-saving surgery to remove the tumour (1 in 10) or life-extending chemotherapy (2 in 10).

Late diagnosis and lack of treatment of pancreatic cancer are often related to issues around accessing the right clinical care, e.g. referral to the right diagnostic tests or referral and management by a pancreatic cancer specialist when diagnosed. It is imperative that people with pancreatic cancer are diagnosed earlier and have the chance to receive the right care and treatment to survive the disease longer and maintain a good quality of life. This is how we will start to drive improvements in survival across the UK.

Case for change

Approximately half of all patients who receive a diagnosis of pancreatic cancer are found to have a tumour in the head of the pancreas. Because the tumour obstructs the flow of bile, many patients develop sudden-onset, painless jaundice, so anyone presenting with jaundice of this type needs urgent assessment and imaging (CT scan) to rule out cancer. If the CT scan shows a tumour in the pancreas, they then need to be referred to a specialist centre straight away to increase the chance of having surgery if they are operable or having palliative care and treatment if they are inoperable.

Currently, the only route to diagnosis for people presented with jaundice is the 2-week wait urgent referral pathway, however this is too slow when pancreatic cancer is the likely diagnosis - jaundice will decrease the health of the patient and the cancer may progress while waiting for a CT scan, increasing the risk of no treatment. A more flexible and reactive model is required for someone who presents with jaundice.
Additionally, patients with jaundice, as a first step, are often referred for endoscopic stenting. This is an intervention to alleviate jaundice and occurs before diagnostic tests take place, however, the procedure can cause health complications which can cause delays to treatment which may even exclude treatment if the cancer has spread. NICE guidelines on the diagnosis and management of pancreatic cancer in adults published in February 2018 recommends that eligible patients should go straight to surgery instead of stenting. When pancreatic cancer is inoperable, referral to a specialist oncologist is key for the patient to receive life-extending chemotherapy.

This is why the lead HPB CNS Vicky Stevenson-Hornby developed a CNS-led service at the Royal Albert Edward Infirmary in Wigan that uses jaundice as an indicator to diagnose pancreatic cancer earlier.

**Aims**

The overarching aim was to diagnose patients with pancreatic cancer earlier and to increase the number of patients who can receive treatment, especially when they are eligible for surgery.

The pathway serves different purposes for different patient groups:

- For those eligible for surgery, the aim is to ensure that assessment and diagnostics happen within 48 hours of presentation, expediting referral to the fast track surgical pathway at the specialist regional centre at Manchester Royal Infirmary.
- For those ineligible for surgery, the aim is to minimise referral delays so that they are seen more promptly by specialist pancreatic cancer oncologists for consideration of palliative chemotherapy.
- For those who are already diagnosed and are receiving palliative chemotherapy, the aim is to minimise treatment delays caused by jaundice, thereby improving prognosis and helping to maintain hope (this will help patients, live long enough to attend a family event or see the birth of a child).
- For all patients with pancreatic cancer, to receive specialised holistic needs assessment managed by an HPB CNS.
The model of jaundice rapid access clinic

1. Patients presenting with sudden-onset, painless jaundice are referred by their GP to gastroenterology for suspected cancer (day 0).
2. When the referral is received, the case is triaged by a consultant gastroenterologist and, if appropriate, passed on to the HPB nursing team, who trigger the rapid access jaundice pathway (day 0-1).
3. The HPB CNS conducts an initial telephone consultation with the patient, during which a detailed history is taken (day 0-1).
4. The patient is given an appointment on the same day or the next day (excluding weekends). Assessment, blood tests, imaging (CT scan), nurse-led review and discussion with the specialist team at the regional centre are completed (day 1-2).
5. Throughout the process, patients receive holistic support from the HBP CNS, who acts as a key worker, not only in terms of managing patients’ physical symptoms but also helping them psychologically, as this is likely to be a difficult time for them.

Planning

1. With regards to succession planning, the aim was to minimise any disruption to service provision and add as little as possible to staff workloads.
2. The pathway was discussed with all colleagues who would need to be involved, including GPs, radiologists, gastroenterologists, surgeons, nursing staff, and staff at the regional HPB centre in Manchester.
3. The pathway was discussed locally with the multidisciplinary team and underwent two trial periods - first for six weeks and then for six months. There were clear improvements after each trial period.
Outcomes

Out of 51 patients in the trial period, the overall cancer pick up rate in the rapid access jaundice clinic in Royal Albert Edward Infirmary was 61% (31 out of 51 referrals) with pancreatic cancer the most common diagnosed cancer (30% - 15 out of 51 referrals). Gallstones (10 cases out of 51) was the second most common condition diagnosed (Figure 1).

Overall, the number of those who had surgery for an HPB malignancy was double compared to the year before the rapid access jaundice clinic started running. From those with pancreatic cancer, 46% (7 out of 15) received surgery in the regional specialist HBP centre in Manchester. The other eight were referred to oncology/palliative clinics. The HPB CNS discussed all people with a HPB cancer with the specialist HPB team and also provided holistic physical and psychological support.

Figure 1: Graph showing diagnosis of the 51 referrals in the rapid access jaundice clinic at Royal Albert Edward Infirmary. Pancreatic cancer and gallstones were the most common conditions diagnosed because of jaundice.
Challenges

Managing workload was a key issue as only one HPB CNS was designing and implementing the pathway. Changing the existing referral process and convincing radiology colleagues to provide same day-imaging and generally persuading people to change existing practice were also challenges that the HPB CNS faced.

Once the pathway was in place, a major challenge was to communicate the new referral process with all relevant stakeholders. Most challenges were overcome through excellent multidisciplinary teamwork. Taking part in the Trust’s quality improvement programme was of great help: it allowed the HPB CNS to learn from colleagues with vast experience in quality improvement and to raise awareness of the pathway at the board and chief executive level.

Future directions

The team in Wigan are now collecting data prospectively so that they can monitor outcomes and evaluate the pathway further. They are planning to capture feedback from service users and stakeholders, which will help refine the pathway. A second HPB CNS has been recruited and the pathway should work more smoothly as a result. The pathway has been shared with other trusts in the Greater Manchester area and there are also plans to share it nationally. There are also plans to extend it across the Trust so it captures not only patients referred to gastroenterology with suspected cancer, but also those attending emergency care and inpatients in medical assessment and surgical assessment units. This would achieve earlier diagnosis in a larger number of patients while reducing the need for interventions when not needed, such as biliary stenting, which can delay surgery.
Conclusions

Diagnosing pancreatic cancer quickly, within two days from referral, using jaundice as indicator is possible within the NHS. Patients with sudden onset, painless jaundice need to access a CT scan quickly for further investigation – as the data shows, gallstones or a mass in the pancreas are the most common diagnosis for patients with jaundice. The rapid access jaundice clinic in Wigan not only accelerates clinical tests and pancreatic cancer diagnosis but it also ensures that all patients are reviewed by HPB specialists and are quickly referred for treatment, either surgery or palliative oncology and care, usually within two weeks from the CT scan.

This model is consistent with the need for faster treatment, within 20 days from diagnosis that is the optimal treatment window as shown in our case for Demand Faster Treatment. This in turn results in more patients receiving treatment such as lifesaving surgery that can potentially improve long-term survival. The role of the HPB CNS to manage the pathway, coordinate care services from primary to secondary and tertiary care and ensure that the right treatment decision is made in time is pivotal. For example, when it comes to surgery, the CNS ensures that the patient is reviewed by the specialist HPB surgeon before any intervention takes place that may not be needed, such as endoscopic stenting so that they can go straight to surgery as recommended by the NICE guidelines. In addition, the role of HPB CNS to provide holistic support to the patients is also essential, especially for those who are diagnosed with pancreatic cancer, a cancer with complex and severe symptoms that deteriorates quickly, affecting the patients both physically and psychologically.
Our policy calls and recommendations

- A rapid access jaundice clinic should be a key element of an optimal pathway for pancreatic cancer and should be implemented across all the Clinical Commissioning Groups, Cancer Alliances and Clinical Cancer Networks across the UK to ensure that people with sudden onset and painless jaundice have direct access to a CT scan and reporting within 48 hours rather than going through the two week referral pathway.
- Each specialist HPB centre across the country should ensure that rapid access jaundice clinics are implemented in their region to ensure that eligible jaundice patients can go straight to surgery without the need of endoscopic stenting as recommended by NICE guidelines.
- The role of a lead HPB CNS to manage the pathway is pivotal not only to ensure that patients have timely access to the right tests and specialised pancreatic cancer clinical specialists for better and faster treatment but also to provide holistic support to the patients, physically and psychologically.
- Given the pivotal role of the lead HPB CNS to ensure that patients have the supportive care they need and get the best treatment possible, it is essential to ensure that the HPB CNS has the managerial support required to navigate tests, book appointments, collect data and evaluate the pathway. This can be fulfilled by a separate patient navigator/data management role.
- Embedding the rapid access jaundice clinic to the model of Rapid Diagnostic Centres iii (in England) is a vital option to address workload and workforce issues through sharing capacity. The HPB CNS leading the jaundice clinic could use where possible the diagnostic capacity and patient navigators of the Rapid Diagnostic Centres to ensure timely referral, diagnosis and access to specialised treatment and care of patients with pancreatic cancer.
- The newly developed primary care networks (in England) should have a pivotal role in increasing local awareness of rapid access pathways for diagnosis and treatment of pancreatic cancer among GPs and other stakeholders to ensure that patients with suspected pancreatic cancer are referred to the HPB CNS-led rapid access clinic.
The model of rapid access jaundice clinic should be expanded to non-jaundice patients as well. When a CT scan completed in a Rapid Diagnostic Centre or through the jaundice pathway shows suspected pancreatic cancer, then any follow up should be managed by a specialist HPB CNS. This will ensure that every patient with suspected pancreatic cancer will be reviewed by the specialist HPB team and will receive specialised supportive care and treatment.

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References