Quality Improvement: Impact of Implementation of Surgical Pathway for abdominal pain on initial assessment time, investigations done and eventual outcome

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- **Background**
  - Historically, in our District General Hospitals, paediatric patients with abdominal pain were seen acutely by surgical teams.
  - Patients referred to surgeons with abdominal pain faced a long wait because:
    - Surgeons were based at Surgical assessment unit/theatre/other wards
    - Surgeons requested blood tests and imaging, and awaited results
  - This delay affected Paediatric assessment unit (PAU) flow and ward capacity
  - Initial data collected 2018. Abdominal pathway implemented July 2019
  - All paediatric patients with abdominal pain were referred to the Paediatric team first for assessment, and only referred by paediatrician to surgeons if deemed appropriate. Follow-up data was collected in 2020.

- **Aims**
  - To assess:
    - time to first review by a team (paediatric vs surgical)
    - percentage of patients
      - with abdominal pain referred to each team
      - who had blood tests and imaging requested by each team
      - discharged, observed, referred and admitted by each team

- **Methodology 2018 and 2020**
  - **Sample Period:** 4 weeks in 2018 vs 6 weeks in 2020
  - **Criteria:** All referrals with abdominal pain to PAU
  - **Relevant Sample Size:** 55 in 2018 vs 89 in 2020
  - **Data Collection:** Retrospective review of:
    - Hard copy notes: times of reviews, and referrals record
    - Electronic patient management system: blood tests, Imaging and discharge summaries
  - **Validation:** Use of Pro-forma
  - **Exclusion Criteria:** Patients who have had appendectomy or were re-attenders

- **Results**
  - **Referral source**
    | Referral source | AUDIT 2020 | AUDIT 2018 |
    |-----------------|------------|------------|
    | ED              | 33         | 29         |
    | GP              | 42         | 20         |
    | WIC & BADGER    | 11         | 6          |
    | HOSP TFR        | 3          | 0          |
    | TOTAL           | 89         | 55         |

  - **First review team**
    | First review team | AUDIT 2020 | AUDIT 2018 |
    |-------------------|------------|------------|
    | Paediatrics       | 77         | 14         |
    | Surgical          | 12         | 41         |
    | TOTAL             | 89         | 55         |

  - **Time to first senior review**

- **Patient outcome on First team review**

- **Summary:**
  - Re-auditing after implementing new Surgical abdominal pathway shows:
    - Overall patient flow through PAU has improved as more patients are being discharged.
    - Appropriate reduction in laboratory investigation 2018 vs 2020 (both by surgical team from 90% to 58% and Paediatric team from 43% to 17%)
    - Optimisation of imaging resources by surgical team from 33% to 17%
    - 88% of patients with abdominal pain had a medical diagnosis at discharge.

- **Conclusion:**
  - Abdominal pain is a common presentation in the paediatric population, mostly benign and self-limiting.
  - Abdominal pain should be assessed by general paediatricians first, and then referred to surgical colleagues if deemed appropriate to avoid unnecessary investigations and imaging.