**NED Output Group- Proposed Key Performance Indicators**

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This document defines the key performance indicators (KPI) that will be presented to users.

The KPIs are categorised by procedure type. Calculation methods and other considerations are given. Where available, BSG minimum standards and aspirational targets are given.

Considerations

For the purpose of many KPIs, the numerator (total number of specific procedures performed by a specific endoscopist in a stated period of time) will be derived from procedures where the endoscopist is recorded as ‘Independent endoscopist 1’.

For a trainee, this will be the total number of procedures where the trainee is listed as ‘trainee’ or as ‘Independent endoscopist 1’ (but is known to be an independent trainee by cross referencing the unique endoscopist ID with their training status).

Endoscopists will be uniquely identified by their GMC/NMC number. Non clinical endoscopists or endoscopists not willing to be identified by their GMC/NMC number will be identified by a unique code generated within the ERS at a local level. This code will be recorded within the ERS in the GMC/NMC code field but would only be known to the local ERS administrator.

An important role of the NED database will be to allow individual colonoscopists, units and hospital trusts to count the overall number of procedures of each type they are performing. Additionally, the database will allow these data to be broken down by indication and procedure findings and the ability to drill down to hospital and trust level.

| KPI | Abbreviation | Definition | Required data fields | Output format | Reference | Standards | Discussion points |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OGD |  |  |  |  |  |  |  |
| Procedure count | UGIProcNum | Number of diagnostic or therapeutic OGD performed by an endoscopist or site in a stated period of time | {procedureName}=[OGD]  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Integer | GRS  JETS  NED |  | Provide number of therapies as a sub-list.  Allow breakdown of number of procedures by indication |
| D2 intubation rate | OGDD2IR | Percentage of OGD performed by a stated endoscopist /site in a stated period where D2 reached | Numerator:  {procedureName}=[OGD], {extent]=[Duodenum 2nd part]  Denominator:  {procedureName}=[OGD]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Percentage | GRS  JETS  NED |  |  |
| J manoeuvre rate | OGDJR | Percentage of OGD performed by a stated endoscopist /site in a stated period where J manoeuvre successfully performed | Numerator:  {procedureName}=[OGD], {jManoeuve}=[Yes]  Denominator:  {procedureName}=[OGD]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | percentage | JETS  NED |  |  |
| Average dose of  Pethidine<70 | OGDPLT70 | Average dose of pethidine administered **when used** for OGD by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | Numerator:  {procedureName}=[OGD], {pethidine}=[number]  Denominator:  {procedureName}=[OGD]  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | JETS  NED |  | Mean dose when used (rather than median) chosen as KPI. |
| Average dose of  Pethidine ≥70 | OGDPGT70 | Average dose of pethidine administered when used for OGD by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[OGD], {pethidine}=[number]  Denominator:  {procedureName}=[OGD]  Conditions:  Exclude where{pethidine}=[null]  {age}≥[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED |  |  |
| Average dose of  Midazolam <70 | OGDMLT70 | Average dose of midazolam administered when used for OGD by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | {procedureName}=[OGD], {midazolam}=[number]  Denominator:  {procedureName}=[OGD]  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED |  |  |
| Average dose of  Midazolam ≥70 | OGDMGT70 | Average dose of midazolam administered when used for OGD by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[OGD], {midazolam}=[number]  Denominator:  {procedureName}=[OGD]  Conditions:  Exclude where{pethidine}=[null]  {age}≥[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED |  |  |
| Average dose of  Fentanyl <70 | OGDFLT70 | Average dose of fentanyl administered when used for OGD by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | {procedureName}=[OGD], {fentanyl}=[number]  Denominator:  {procedureName}=[OGD]  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mcg) | NED |  |  |
| Average dose of  Fentanyl ≥70 | OGDFGT70 | Average dose of fentanyl administered when used for OGD by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[OGD], {fentanyl}=[number]  Denominator:  {procedureName}=[OGD]  Conditions:  Exclude where{pethidine}=[null]  {age}≥ [70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mcg) | NED |  |  |
| Unsedated procedures | OGDUS | Percentage of OGD performed by a stated endoscopist or at a stated site in a stated period where the no midazolam, fentanyl or pethidine was administered. | {procedureName}=[OGD], {pethidine}=[null], {midazolam}=[null], {fentanyl}=[null]  Denominator:  {procedureName}=[OGD]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Percentage | JETS  NED |  |  |
| Greater than recommended dose | OGDGTRD | Percentage of OGD performed by a stated endoscopist or at a stated site in a stated period where the dose of midazolam exceeded 5mg in patients aged <70 and 2.5mg in patients aged ≥70 |  | Percentage | JETS  NED |  | As per BSG safe sedation guidelines |
| Comfort score | OGDCOM34 | Percentage of OGD performed by a stated endoscopist or at a stated site in a stated period where the comfort level is recorded as 3 or 4 | {procedureName}=[OGD],  Numerator: {DiscomfortEnum}= [moderate] or [severe]  Denominator:  {procedureName}=[OGD] | Percentage where comfort score is moderate or severe | JETS  NED |  | All ERS should adopt modified Gloucester system:  None- No discomfort  Minimal- 1 or 2 episodes of mild discomfort with no distress  Mild- More than 2 episodes of discomfort without distress  Moderate- Significant discomfort experienced several times with some distress  Severe- Frequent discomfort with significant distress |
| Adverse events\* | OGDAEALL | Number of adverse events recorded during or following OGD performed by a stated endoscopist or at a stated site in a stated period | {AdverseEventEnum} |  | JETS  NED |  | Include breakdown by type |
| Serious complications | OGDAESEV | Number of ‘severe’ adverse events recorded during or following OGD performed by a stated endoscopist or at a stated site in a stated period | {AdverseEventEnum} |  |  |  | Would require adverse events to be graded on severity |
| Interval cancer rate | OGDICR | Proportion of times outcome of second OGD within 3 or 5 years has an outcome of cancer which wasn`t present at the first | Numerator- First OGD- {DiagnosisEnum} is not [oesophageal tumour- malignant] or [gastric tumour- malignant]  Second OGD- {DiagnosisEnum} = [oesophageal tumour- malignant] or [gastric tumour- malignant]  Denominator- {procedureName}=[OGD] | percentage | MDR |  | Possible minimum time period between first and second procedure under discussion. Ie event occurs between 1 and 3 (or 5) years after the index procedure |

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| KPI | Abbreviation | Definition | Required data fields | Output format | Relevant outcome source | Minimum Standard/ Target | Discussion points |
| Colonoscopy |  |  |  |  |  |  |  |
| Procedure count | COLProcNum | Number of diagnostic or therapeutic colonoscopies performed by an endoscopist or site in a stated period of time | {procedureName}=[COLON]  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Integer | GRS  JETS  NED | None set | Provide number of therapies as a sub-list. |
| Digital rectal examination | COLDRE | Percentage of colonoscopies where a digital rectal examination is recorded as having been performed by a stated endoscopist or at a stated site in a stated period | Numerator:  {procedureName}=[COLON], {Digitalrectal exam}=[Yes]  Denominator:  {procedureName}=[COLON]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | percentage | JETS  NED  BSG | Rectal examination or omission should be recorded in 100% of cases (BSG) |  |
| Caecal intubation rate | COLCIR | Percentage of colonoscopies where caecum or anastomosis reached by a stated endoscopist or at a stated site in a stated period | Numerator:  {procedureName}=[COLON], {ExtentTypeEnum}=[Caecum] or [terminal ileum] or [anastomosis] or[ileo-colon anastomosis] or [neo-terminal ileum]  Denominator:  {procedureName}=[COLON]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Percentage | JETS  NED | Minimum standard 90%, aspirational target 95% |  |
| Terminal ileum intubation rate | COLTIIR | Percentage of colonoscopies where terminal ileum reached | Numerator:  {procedureName}=[COLON], {ExtentTypeEnum}= [terminal ileum] or [neo-terminal ileum]  Denominator:  {procedureName}=[COLON]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Percentage | JETS | None set |  |
| Rectal retroversion | COLRRR | Percentage of colonoscopies where rectal retroversion is recorded as having been performed by a stated endoscopist or at a stated site in a stated period | Numerator:  {procedureName}=[COLON], {rectal retroversion}=[Yes]  Denominator:  {procedureName}=[COLON]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | percentage | JETS  NED  BSG | Minimum Standard 90% (BSG) | No rectal retroversion field in Business management document |
| Colonoscopy Withdrawal time | COLNCCWT | Mean withdrawal time for all negative, complete colonoscopies performed by a stated endoscopist in a stated period | Numerator:  Sum of {withdrawal time} where no procedure performed and no polyps detected (normal colonoscopy).  Denominator:  {procedureName}=[COLON] where no procedure performed and no polyps detected (normal colonoscopy).  Levels:  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | minutes | NED  BSG | Minimum standard – mean of ≥6mins  Aspirational target- mean of ≥10 mins (BSG) |  |
| Polyp detection rate | COLPDR | Percentage of colonoscopies performed by a stated endoscopist or at a stated site in a stated period at which one or more polyps were detected | Numerator:  {procedureName}=[COLON],  {DiagnosisEnum}=[Polyp/s]  Denominator:  {procedureName}=[COLON]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | percentage | NED  BSG | Adenoma detection should be used. Polyp detection rate may be used where it has been demonstrated to accurately reflect ADR  Minimun standard 15%  Aspirational target 20% | Numerator could be based on therapeutic field=polypectomy |
| Polyp removal rate | COLPRR | Percentage of polyps identified and successfully removed by a stated endoscopist or at a stated site in a stated period. | Numerator: {procedureName}=[COLON],  {Therapeutic Type}= [polypectomy]=[successful]  Denominator=? | percentage | BSG  NED  JETS | Not set |  |
| Polyp removal success <1cm | COLPRSLT10 | Percentage of polyps less than 1cm in size successfully removed by a stated endoscopist or at a stated site in a stated period. | Numerator:  {procedureName}=[COLON],  {Therapeutic Type}= [polypectomy]=[successful],[polypSize]<10mm  Denominator=? | Percentage | JETS | Not set |  |
| Polyp retrieval success- percentage ≥1cm | COLPRGT10 | Percentage of polyps 1cm or greater in size successfully removed by a stated endoscopist or at a stated site in a stated period. | Numerator:  {procedureName}=[COLON],  {Therapeutic Type}= [polypectomy]=[successful], [retrieval]=[successful], [polypSize]>=10mm  Denominator=? | percentage | JETS | Minimum standard 90% (BSG) |  |
| Average dose of  Pethidine <70 | COLPLT70 | Average dose of pethidine administered when used for colonoscopy by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | Numerator:  {procedureName}=[COL], {pethidine}=[number]  Denominator:  {procedureName}=[COL]  colonoscopy  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | JETS  NED | Auditable Outcome (BSG)  Median total dose ≤50mg |  |
| Average dose of  Pethidine ≥70 | COLPGT70 | Average dose of pethidine administered when used for colonoscopy by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[COL], {pethidine}=[number]  Denominator:  {procedureName}=[COL]  Conditions:  Exclude where{pethidine}=[null]  {age}≥[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED | Auditable Outcome (BSG)  Median total dose ≤25mg |  |
| Average dose of  Midazolam <70 | COLMLT70 | Average dose of midazolam administered when used for colonsocopy by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | {procedureName}=[COL], {midazolam}=[number]  Denominator:  {procedureName}=[COL]  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED | Auditable Outcome (BSG)  Median total dose ≤5 mg |  |
| Average dose of  Midazolam ≥70 | COLMGT70 | Average dose of midazolam administered when used for colonoscopy  by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[COL], {midazolam}=[number]  Denominator:  {procedureName}=[COL]  Conditions:  Exclude where{pethidine}=[null]  {age}≥[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED | Auditable Outcome (BSG)  Median total dose ≤2mg |  |
| Average dose of  Fentanyl <70 | COLFLT70 | Average dose of fentanyl administered when used for colonoscopy by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | {procedureName}=[COL], {fentanyl}=[number]  Denominator:  {procedureName}=[COL]  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mcg) | NED | Auditable Outcome (BSG)  Median total dose ≤100mcg |  |
| Average dose of  Fentanyl ≥70 | COLFGT70 | Average dose of fentanyl administered when used for colonoscopy by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[COL], {fentanyl}=[number]  Denominator:  {procedureName}=[COL]  Conditions:  Exclude where{pethidine}=[null]  {age}≥ [70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mcg) | NED | Auditable Outcome (BSG)  Median total dose ≤50 mcg |  |
| Unsedated procedures | COLUS | Percentage of colonoscopy  performed by a stated endoscopist or at a stated site in a stated period where the no midazolam, fentanyl or pethidine was administered. | {procedureName}=[COL], {pethidine}=[null], {midazolam}=[null], {fentanyl}=[null]  Denominator:  {procedureName}=[COL]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Percentage | JETS  NED | Not set |  |
| Sedation greater than recommended dose | COLGTRD | Percentage of colonosocpy performed by a stated endoscopist or at a stated site in a stated period where the dose of midazolam exceeded 5mg in patients aged <70 and 2.5mg in patients aged ≥70 OR the dose of fentanyl exceeded 100 mcg in patients aged <70 and 50mcg in patients aged ≥70 OR where the dose of pethidine exceeded 50 mg in patients aged <70 and 25 mg in patients aged ≥70 |  | Percentage | JETS  NED | Auditable outcome | As per BSG safe sedation guidelines |
| Colonoscopy Comfort Score | COLCOM34 | Percentage of colonoscopies performed by a stated endoscopist or at a stated site in a stated period where the comfort level is recorded as 3 or 4 | {procedureName}=[COL],  Numerator: {DiscomfortEnum}= [moderate] or [severe]  Denominator:  {procedureName}=[COL] | Percentage where comfort score is moderate or severe | JETS  NED | Auditable outcome  Aim to have less than 10 % of patients with moderate or severe discomfort. (BSG) | All ERS should adopt modified Gloucester system:  Minimal- 1 or 2 episodes of mild discomfort with no distress  Mild- More than 2 episodes of discomfort without distress  Moderate- Significant discomfort experienced several times with some distress  Severe- Frequent discomfort with significant distress |
| Bowel preparation quality | COLBPQ | Proportion of colonoscopies where bowel prep | Numerator:  Number of procedure where bowel prep quality= inadequate  Denominator:  {procedureName}=[COL]  Modified Aaronchick classification:  excellent (>90 % of mucosa seen, mostly liquid stool, minimal suctioning needed for adequate visualization)  good (>90 % of mucosa seen, mostly liquid stool, significant suctioning needed for adequate visualization)  fair (>90 % of mucosa seen, mixture of liquid and semisolid stool, could be suctioned and / or washed)  inadequate ( < 90 % of mucosa seen, mixture of semisolid and solid stool that could not be suctioned or washed). | Percentage | NED  BSG/JAG  GRS | Bowel preparation of sufficient diagnostic quality to not warrant repeat or alternative test (ie not inadequate)  Minimumm standard 90%  Aspirational target 95%  (BSG) | - For BSG KPI- map to levels bowel prep not of sufficient quality to require repeat or alternative test. |
| Tattooing of cancers | COLTATCA | Proportion of suspected cancers (not in the caecum or rectum) where a tattoo is placed |  | Percentage | BSG | Not specified |  |
| Tattooing of polyps >19mm in size | COLTAT20 | Proportion of polyps 20mm or larger in size,not in the caecum or rectum, where a tattoo is placed |  | Percentage | BSG | Minimum standard 100% |  |
| Diagnostic biopsies for unexplained diarrhoea | COLRCB | Proportion of procedures where chronic diarrhoea is the indication and a minimum of 2 left colonic and 2 right colonic biopsies are obtained | Numerator:  {BiopsyEnum}= [Colonic biopsy series]  Denominator:  {procedureName}=[COL], {IndicationsEnum}=[Diarrhoea-chronic] | Percentage | BSG  GRS | Minimum standard- Rectal biopsies taken in 100% of cases  Aspirational target- minimum of 2 right and 2 left biopsies |  |
| Adverse events | COLAEALL | Number of adverse events recorded during or following colonsocopies performed by a stated endoscopist or at a stated site in a stated period | {AdverseEventEnum} |  | JETS  NED |  | Include breakdown by type |
| Serious complications | COLAESEV | Number of ‘severe’ adverse events recorded during or following colonsocopies performed by a stated endoscopist or at a stated site in a stated period | {AdverseEventEnum} |  |  |  | Would require adverse events to be graded on severity.  Classification of severity according to tool used by BCSP (see appendix 2) |
| Post colonoscopy colorectal cancer rate | COLICR3 (or5) | Proportion of times outcome of second colonsocopies within 3 or 5 years has an outcome of cancer which wasn`t present at the first | Numerator- First colonsocopies - {DiagnosisEnum} is not [oesophageal tumour- malignant] or [gastric tumour- malignant]  Second colonsocopies - {DiagnosisEnum} = [oesophageal tumour- malignant] or [gastric tumour- malignant]  Denominator- {procedureName}=[COL] | percentage | BSG |  | Possible minimum time period between first and second procedure under discussion. Ie event occurs between 1 and 3 (or 5) years after the index procedure. |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| KPI | Abbreviation | Definition | Required data fields | Output format | Relevant outcome source | Minimum Standard/ Target | Discussion points |
| Flexi Sig |  |  |  |  |  |  |  |
| Procedure count | FSProcNum | Number of diagnostic or therapeutic flexible sigmoidoscopies performed by an endoscopist or site in a stated period of time | {procedureName}=[FLEXI]  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Integer | GRS  JETS  NED |  | Provide number of therapies as a sub-list. |
| Digital rectal examination | FSDRE | Percentage of flexible sigmoidoscopies where a digital rectal examination is recorded as having been performed by a stated endoscopist or at a stated site in a stated period | Numerator:  {procedureName}=[FLEXI], {Digitalrectal exam}=[Yes]  Denominator:  {procedureName}=[FLEXI]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | percentage | JETS  NED  BSG |  |  |
| Descending colon intubation rate | FSDCIR | Percentage of flexible sigmoidoscopies where caecum or anastomosis reached by a stated endoscopist or at a stated site in a stated period | Numerator:  {procedureName}=[FLEXI], {ExtentTypeEnum}=[Descending colon] or [transverse colon] or [ascending colon] or [caecum] [anastomosis] or[ileo-colon anastomosis] or [neo-terminal ileum]  Denominator:  {procedureName}=[FLEXI]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Percentage | JETS  NED |  |  |
| Rectal retroversion | FSRRR | Percentage of flexible sigmoidoscopy where rectal retroversion is recorded as having been performed by a stated endoscopist or at a stated site in a stated period | Numerator:  {procedureName}=[FLEXI], {rectal retroversion}=[Yes]  Denominator:  {procedureName}=[FLEXI]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | percentage | JETS  NED  BSG |  |  |
| Polyp detection rate | FSPDR | Percentage of flexible sigmoidoscopy performed by a stated endoscopist or at a stated site in a stated period at which one or more polyps were detected | Numerator:  {procedureName}=[FLEXI],  {DiagnosisEnum}=[Polyp/s]  Denominator:  {procedureName}=[FLEXI]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | percentage | NED  BSG |  | Numerator could be based on therapeutic field=polypectomy |
| Polyp removal rate | FSPRR | Percentage of polyps identified and successfully removed by a stated endoscopist or at a stated site in a stated period. | Numerator: {procedureName}=[FLEXI],  {Therapeutic Type}= [polypectomy]=[successful]  Denominator=? | percentage | BSG  NED  JETS |  |  |
| Polyp removal success <1cm | FSPRSLT10 | Percentage of polyps less than 1cm in size successfully removed by a stated endoscopist or at a stated site in a stated period. | Numerator:  {procedureName}=[FLEXI],  {Therapeutic Type}= [polypectomy]=[successful],[polypSize]<10mm  Denominator=? | Percentage | JETS |  |  |
| Polyp retrieval success- percentage ≥1cm | FSPRGT10 | Percentage of polyps 1cm or greater in size successfully removed by a stated endoscopist or at a stated site in a stated period. | Numerator:  {procedureName}=[FLEXI],  {Therapeutic Type}= [polypectomy]=[successful], [retrieval]=[successful], [polypSize]>=10mm  Denominator=? | percentage | JETS |  |  |
| Average dose of  Pethidine <70 | FSPLT70 | Average dose of pethidine administered when used for flexible sigmoidoscopy by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | Numerator:  {procedureName}=[FLEXI], {pethidine}=[number]  Denominator:  {procedureName}=[FLEXI]  colonoscopy  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | JETS  NED |  |  |
| Average dose of  Pethidine ≥70 | FSPGT70 | Average dose of pethidine administered when used for flexible sigmoidoscopyby a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[FLEXI], {pethidine}=[number]  Denominator:  {procedureName}=[FLEXI]  Conditions:  Exclude where{pethidine}=[null]  {age}≥[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED |  |  |
| Average dose of  Midazolam <70 | FSMLT70 | Average dose of midazolam administered when used for flexible sigmoidoscopyby a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | {procedureName}=[FLEXI], {midazolam}=[number]  Denominator:  {procedureName}=[FLEXI]  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED |  |  |
| Average dose of  Midazolam ≥70 | FSMGT70 | Average dose of midazolam administered when used for flexible sigmoidoscopy  by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[FLEXI], {midazolam}=[number]  Denominator:  {procedureName}=[FLEXI]  Conditions:  Exclude where{pethidine}=[null]  {age}≥[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mg) | NED |  |  |
| Average dose of  Fentanyl <70 | FSFLT70 | Average dose of fentanyl administered when used for flexible sigmoidoscopy by a stated endoscopist or at a stated site in a stated period in patients less than 70 years of age. | {procedureName}=[FLEXI], {fentanyl}=[number]  Denominator:  {procedureName}=[FLEXI]  Conditions:  Exclude where{pethidine}=[null]  {age}<[70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mcg) | NED |  |  |
| Average dose of  Fentanyl ≥70 | FSFGT70 | Average dose of fentanyl administered when used for flexible sigmoidoscopy by a stated endoscopist or at a stated site in a stated period in patients 70 years of age or older. | {procedureName}=[FLEXI], {fentanyl}=[number]  Denominator:  {procedureName}=[FLEXI]  Conditions:  Exclude where{pethidine}=[null]  {age}≥ [70]  Levels:  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Average dose (mcg) | NED |  |  |
| Sedation greater than recommended dose | FSGTRD | Percentage of flexible sigmoidoscopyperformed by a stated endoscopist or at a stated site in a stated period where the dose of midazolam exceeded 5mg in patients aged <70 and 2.5mg in patients aged ≥70 OR the dose of fentanyl exceeded 100 mcg in patients aged <70 and 50mcg in patients aged ≥70 OR where the dose of pethidine exceeded 50 mg in patients aged <70 and 25 mg in patients aged ≥70 |  | Percentage | JETS  NED |  | As per BSG safe sedation guidelines |
| Comfort scores | FSCOM34 | Percentage of flexible sigmoidoscopyperformed by a stated endoscopist or at a stated site in a stated period where the comfort level is recorded as 3 or 4 | {procedureName}=[FLEXI],  Numerator: {DiscomfortEnum}= [moderate] or [severe]  Denominator:  {procedureName}=[FLEXI] | Percentage where comfort score is moderate or severe | JETS  NED |  |  |
| Bowel preparation quality | FSBPQ | Proportion of flexible sigmoidoscopy where bowel prep | Numerator:  number of procedues wherebowel preparation quality=inadequate  Denominator:  {procedureName}=[ FLEXI]  Modified Aaronchick classification:  excellent (>90 % of mucosa seen, mostly liquid stool, minimal suctioning needed for adequate visualization)  good (>90 % of mucosa seen, mostly liquid stool, significant suctioning needed for adequate visualization)  fair (>90 % of mucosa seen, mixture of liquid and semisolid stool, could be suctioned and / or washed)  inadequate ( < 90 % of mucosa seen, mixture of semisolid and solid stool that could not be suctioned or washed). | Percentage | NED  BSG/JAG  GRS |  | - For BSG KPI- map to levels bowel prep not of sufficient quality to require repeat or alternative test. |
| Tattooing of cancers | FSTATCA | Proportion of suspected cancers (not in the caecum or rectum) where a tattoo is placed |  | Percentage | BSG |  |  |
| Tattooing of polyps >19mm in size | FSTAT20 | Proportion of polyps 20mm or larger in size,not in the caecum or rectum, where a tattoo is placed |  | Percentage |  | BSG |  |
| Adverse events | FSAEALL | Number of adverse events recorded during or following flexible sigmoidoscopy performed by a stated endoscopist or at a stated site in a stated period | {AdverseEventEnum} |  |  | JETS  NED | Include breakdown by type |
| Serious complications | FSAESEV | Number of ‘severe’ adverse events recorded during or following flexible sigmoidoscopy performed by a stated endoscopist or at a stated site in a stated period | {AdverseEventEnum} |  |  |  | Would require adverse events to be graded on severity |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| KPI | Abbreviation | Definition | Required data fields | Output format | Relevant outcome source | Minimum Standard/ Target | Discussion points |
| ERCP |  |  |  |  |  |  |  |
| Procedure count | ERCPProcNum | Number of diagnostic or therapeutic colonoscopies performed by an endoscopist or site in a stated period of time | {procedureName}=[ERCP]  By {site}=[x] or  By {professionalbodycode}=[x]  In time period {Ukdatetype}= [x]to[y] | Integer | JETS  BSG |  |  |
| Cannulation rate for accessible virgin main papilla |  |  |  |  |  |  | **Current ERCP KPIs under discussion.** |
| Brushings rate for histologically undiagnosed strictures |  |  |  |  |  |  |
| Successful clearance rate for Stones < 10mm |  |  |  |  |  |  |
| Successful duct decompression for stones > 10mm |  |  |  |  |  |  |
| Successful stenting of low/mid cbd strictures |  |  |  |  |  |  |
| Successful stenting of attempted hilar strictures |  |  |  |  |  |  |
| Successful insertion of prophylactic pancreatic stents |  |  |  |  |  |  |
| Overall procedural success rate |  |  |  |  |  |  |
| Average dose of  Pethidine <70 |  |  |  |  |  |  |
| Average dose of  Pethidine ≥70 |  |  |  |  |  |  |
| Average dose of  Midazolam <70 |  |  |  |  |  |  |
| Average dose of  Midazolam ≥70 |  |  |  |  |  |  |
| Average dose of  Fentanyl <70 |  |  |  |  |  |  |
| Average dose of  Fentanyl ≥70 |  |  |  |  |  |  |
| Comfort score |  |  |  |  |  |  |
| Adverse events |  |  |  |  |  |  |
| Serious complications |  |  |  |  |  |  |