

1 **Appendix Indicator selection**

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3 ERCP indicator 1 – Doctor patient contact prior to ERCP. Over the past decades healthcare practitioners  
4 consider the biophysical model to be an increasingly important factor in healthcare delivery<sup>12</sup>. This includes  
5 investment the physician-patient relationship. It has been widely accepted that doctor-patient  
6 communication plays a vital role in healthcare<sup>19</sup>. A recent study has shown inversely associated anxiety  
7 levels when consultation prior to surgery has been conducted by the doctor<sup>11</sup>. Furthermore, studies show  
8 that preoperative consultation improves a patients managing capability with realistic outcomes of  
9 intervention by shared decision making and informed consent<sup>20</sup>. This indicator is defined as an outpatient  
10 visit before intervention, which for reimbursement rules can only be fulfilled after a face-to-face contact  
11 between a patient and doctor.

12 ERCP indicator 2 - Number of ERCPs is max. 1

13 Studies have shown that ERCP success rates can strongly fluctuate<sup>13 14 15</sup>. Performing a second ERCP strongly  
14 suggests that the first attempt has failed due to an undisclosed reason.

15 ERCP indicator 3 - Inpatient stay maximum 7 days

16 Redundant inpatient hospital stay can be a burden to the patient, as well as a waste of resources. An array of  
17 studies have shown cost decrease when minimalizing inpatient stay with equal or improved outcomes<sup>28,16</sup>.  
18 Furthermore, inpatient stay after ERCP exceeding seven days indicates arisen complications. A consensus of  
19 seven days as a threshold for the likelihood of complications was reached in consultation with GI-specialists.

20 ERCP indicator 4 - no CT colonography after ERCP

21 Conducting a diagnostic CT after ERCP is an acknowledged indicator that complications have arisen during  
22 the treatment.<sup>17</sup>

23 ERCP indicator 5 - No hospital readmission within 30 days

24 Reducing all-cause readmissions benefits both the physician as the patient. However, literature states  
25 readmissions are not always preventable<sup>18</sup>, yet readmission within 30 days after the procedure is considered  
26 a strong indicator for procedure-related complications or failed procedures.

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28 IBD indicator 1 – Maximum 56 days between first consult and colonoscopy

29 Evidence that early diagnosis changes the outcomes of adult Crohn’s disease is indirect, yet cannot be  
30 ignored. Patients referred with clinical features highly suggestive of significant active IBD should be seen  
31 within two to four weeks<sup>27</sup>. In this study the indicator for waiting time was set on 8 weeks to flag outliers.

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33 IBD indicator 2 – Number of colonoscopy is max. 1

34 Performing a second colonoscopy strongly suggests that the first attempt has failed due to an undisclosed  
35 reason<sup>13 14 15</sup>.

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37 IBD indicator 3 - Inpatient stay maximum 3 days

38 Reducing inpatient stay is possible with equal or improved outcomes<sup>28,16</sup>, where for IBD was 3 days was  
39 empirically found as a reasonable threshold.

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41 IBD indicator 4 -Doctor-patient counseling

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43 The care of patients following an endoscopy is important for a good patient experience and for safety and  
44 quality reasons. Identifying issues with aftercare processes and improving them can be achieved if patients  
45 are systematically asked for feedback and compliance with surveillance recommendations are measured<sup>29</sup>.

46  
47 IBD indicator 5 - No ER admission after colonoscopy

48 Emergency admissions after gastroenterology are not very common (<4%). Complications resulting in visits  
49 to the emergency department can be a serious indicator for improvement<sup>26</sup>.

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51 CRC screening indicator 1 – Doctor patient contact prior to colonoscopy

52 Important from both investment in the physician-patient relationship, building doctor-patient  
53 communication<sup>19</sup> and shared decision making and informed consent<sup>20</sup>.

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55 CRC screening indicator 2 – No CT colonography

56 Population screening for colorectal cancer is widely adopted, but the preferred strategy is still under debate.

57 Optical colonoscopy is currently the most complete test. While CT colonography has been proposed as an

58 alternative screening test, being preferable of its minimally invasive nature, lower costs and higher

59 participation rates, optical colonoscopy identifies significantly more advanced neoplasma<sup>21</sup>.

60

61 CRC screening indicator 3 – No laboratory diagnostics

62 The ability to identify hospital complication rates has been limited. Clinical laboratory diagnostics including c-

63 reactive protein testing and microbial culture testing are suggested as indicator for sepsis or wound

64 infection<sup>22 23</sup>, yet these diagnostics are not very common as part of colon screening pathway (<2%).

65

66 CRC screening indicator 4 – No hospital admission

67 Admission for hospitalization can be a sign of serious adverse event, including perforation and intraluminal

68 bleeding<sup>24 25</sup>, or routinely hospitalization. The first indication complications, yet the latter an economic

69 burden.

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71 CRC indicator 5 - No ER admission after colonoscopy

72

73 Emergency admissions after colon cancer screening are not very common (<1%), yet remain a feasible

74 indicator for improvement<sup>26</sup>.

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