

## 5 Adverse events

As with any invasive surgical procedure, there is the risk of an adverse event occurring with a colonoscopy. This chapter discusses the recorded adverse events for participants invited into the NBCSP in 2008 who underwent a colonoscopy as a result of a positive FOBT.

### Fast facts

- For participants invited in 2008, 31 out of 8,741 known colonoscopies (0.4%) resulted in an adverse event.
- Bleeding or 'other' adverse events were the most commonly recorded, with males recording more events than females.
- The low rate of adverse events recorded in 2008 was similar to 2007.

## Overall adverse events

While the NBCSP records the number of people referred for various procedures (for example, sigmoidoscopy, barium enema, colonoscopy), only outcomes (including adverse) of colonoscopy were looked at, as it is the recommended follow-up procedure after a positive FOBT (ACN 2005). The use of Adverse Event forms is not mandatory in the NBCSP; therefore, these may be under-reported.

Colonoscopy is an invasive procedure performed after preparation of the bowel. The procedure is performed under sedation, and is safe and relatively pain free. However, several complications and adverse events are associated with colonoscopy, including:

- intolerance of the bowel preparation – some people develop dizziness, headaches or vomiting
- reaction to the sedatives or anaesthetic – this is very uncommon but is of concern in people who have severe heart disease or lung disease
- perforation (making a hole in the bowel wall)
- major bleeding from the bowel – this can occur as a result of polyps being removed.

The draft report of the Quality Working Group to the NBCSP noted that the two main complications arising were perforation and post-colonoscopy bleeding. A literature review by the Quality Working Group showed the risk of death associated with colonoscopy to be low, with incidence rates ranging from 0.0% to 0.03%. The incidence rate of perforation also varied between 0.07% and 0.3%, and bleeding was found to have an incidence rate between 0.03% and 2.0% (NBCSP-QWG 2008).

Table 5.1 shows adverse events recorded up to 31 January 2009 for people participating in the NBCSP in 2008. Of these invitees, 8,741 were known to have undergone a colonoscopy, with 31 recording an adverse outcome. Males recorded more adverse events, with bleeding and 'other' adverse events being the most common. The most frequent outcome of the adverse events recorded was unplanned hospital admission within 30 days of colonoscopy.

Table 5.2 shows trends in adverse events since 2007. The above findings for 2008 appear to be similar to those recorded for 2007; however, rates of adverse bleeding events appear to have reduced since 2007, though this reduction was not statistically significant.

## Adverse event tables

Table 5.1: Adverse outcomes following investigation of positive FOBT by colonoscopy: 2008

	Colonoscopies	Adverse outcomes									
		Bleeding	Infection/ sepsis	Perforation	Reaction to sedation/ anaesthesia	Death	Other	Delayed discharge	Unplanned hospital admission within 30 days	Surgery required	
Males	Number	4,596	10	1	1	0	0	10	4	11	4
	Per cent	52.6	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1
Females	Number	4,145	2	0	2	1	0	7	5	7	2
	Per cent	47.4	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.0
<b>Persons</b>	<b>Number</b>	<b>8,741</b>	<b>12</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>17</b>	<b>9</b>	<b>18</b>	<b>6</b>
	<b>Per cent</b>	<b>100.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>
	<b>95% CI</b>		<b>0.1–0.2</b>	<b>0.0–0.0</b>	<b>0.0–0.1</b>	<b>0.0–0.0</b>	<b>0.0–0.0</b>	<b>0.1–0.3</b>	<b>0.0–0.2</b>	<b>0.1–0.3</b>	<b>0.0–0.1</b>

Note: A colonoscopy may have more than one adverse event.

Source: Adverse Outcome form sections 2 and 3.

Table 5.2: Trends in adverse outcomes following investigation of positive FOBT by colonoscopy: 2007–2008

	Adverse outcomes									
	Bleeding	Infection/ sepsis	Perforation	Reaction to sedation/ anaesthesia	Death	Other	Delayed discharge	Unplanned hospital admission within 30 days	Surgery required	
2007	Per cent	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1
	95% CI	0.1–0.2	0.0–0.1	0.0–0.1	0.0–0.1	0.0–0.0	0.1–0.3	0.1–0.2	0.1–0.3	0.0–0.1
2008	Per cent	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1
	95% CI	0.1–0.2	0.0–0.0	0.0–0.1	0.0–0.0	0.0–0.0	0.1–0.3	0.0–0.2	0.1–0.3	0.0–0.1

Note: A colonoscopy may have more than one adverse event.

Source: Adverse Outcome form sections 2 and 3.