Questionnaire - Round 1

A1 Unique citation ID

Development of CORE SETS for registries to monitor and evaluate bariatric surgery

Welcome to the International Bariatric Surgery Registry project

The International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) has set up a global registry project to allow for monitoring and comparisons of obesity and bariatric surgery on an international level, with the aim of improving patient care. Agreed standardised sets of information, also known as 'core sets', will optimise comparisons. Core sets include the information that should be measured and reported as a minimum in all evaluations of a particular intervention.

We are proposing 3 core sets, each representing a different time point at which information is collected in the registry.

Core set 1 (baseline information) will focus on information that is collected only once before surgery (baseline)

Core set 2 (effectiveness outcomes) will focus on information used to measure the impact or effectiveness of bariatric surgery - measured <u>both before and after</u> surgery Core set 3 (surgical information) will focus on information measured <u>during or after</u> surgery, including information about the surgical procedure (Set 3a - surgeons only) and potential complications and side-effects of surgery (Set 3b)

Consensus among expert stakeholders (i.e. you) working in the field of bariatric surgery on the minimum core information to measure in each set in the registry is now needed. This is the first of two surveys where we will ask you to rate which information (data items) you think are **critical** to be measured and reported in a bariatric surgery registry as part of the core sets. The survey items are written in plain language, followed by medical terminology in brackets (where relevant).

Please rate each item using a Likert scale of 1-9. A score of **7-9 indicates an item that is of critical importance**, **4-6 an item that is important but not critical and 1-3 an item of limited importance**. The scores will be analysed and used to develop a second survey, where you will see opinions of your peer group and the other stakeholder groups. At the end of the second survey, we plan to hold a consensus meeting where the final core sets will be agreed.

PLEASE NOTE: when rating items, please remember that the core sets represent the *minimum* that should be included in all bariatric registries internationally to allow comparisons. Development of the core sets will not preclude other information being collected in the registry.

	First, a few things about you	Options
A2	Professional specialty (please tick all that apply)	1, Bariatric Surgeon 2, Bariatric Physician 3, Specialist nurse 4, Dietitian 5, Psychologist 6, Other
А3	Other speciality (please specify)	
A4	How many years have you worked in the bariatric surgery field?	1, < 5 2, 5-10 3, >10
A5	With which gender do you identify?	1, Male 2, Female 3, Other 4, prefer not to say
A6	What is your age?	1, < 30 2, 30-39 3, 40-49 4, 50-59 5, 60-69 6, 70+ 7, Prefer not to say
A7	In what country do you live?	Drop down list of all 195 countries

	e Set 1: Baseline only information includes items that are measured <u>only once before</u> surgery (at baseline).	
This is	includes items that are measured <i>only once before</i> surgery (at baseline).	
inisir		
repre	se rate how critical you think it is that the following items are measured before surgery and recorded in a bariate esents your opinion. Reminder: 7-9 'critical importance', 4-6 'important but not critical', 1-3 'limited importance' se tick 'unable to answer'.	- , - ,
i. Adn	ministrative information	
1 Source paying	ce of funding to pay for the surgery, e.g., private health care insurance, public funding/national health service, self-	1 2 3 4 5 6 7 8 9 Unable to answer
2 Date o	on which the patient was referred for surgery	
3 Details	ils of which members of the multi-disciplinary team have been involved with the patient to date	
ii. Pat	atient demographics	
4 Sex of	of the patient	
5 Age of	of the patient	
6 Ethnic	city of the patient	
7 Educa	ational level of the patient	
8 Ability	ry of patient to purchase/afford supplements for life, post-surgery	
iii. Cli	linical history	
9 Height	nt of the patient	
10 Histor	ry of any previous bariatric surgery	
11 Details	ils of previous weight loss programs	
12 Details	ils of pre-surgery weight loss	
13 Time p	period over which pre-surgery weight loss occurred	
14 Durati	tion of type 2 diabetes	
15 Other	r medical conditions not directly related to obesity e.g., type 1 diabetes, organ transplantation, dementia	

For this core set (Set 1 - Baseline only information), if there is anything else you think is *critical* to include in a bariatric surgery registry, please specify

Core Set 2: Effectiveness outcomes

This includes items that may be measured <u>both before and after surgery</u> to <u>measure the impact or effectiveness</u> of bariatric surgery.

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder:** 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'.

For each item, please also indicate all timepoints you consider are critical to measure the item (tick all that are critical)

	i. Obesity-related disease									
17	Abnormal or irregular heartbeat, or use of medication (arrhythmia)	1 U	2 nable t	3 o ansv	4 ver	. 5	6	7	8	9
	In addition to baseline, which time point(s) after surgery is the most important to measure this item? (tick all that apply)		6 weeks, 1 year, 2 years, 5 years, 5-10 years than 10 years, other		ears,	more				
	Other (please specify)									
18	High blood pressure, or use of blood pressure medication (hypertension)									
19	Risk of future heart and vascular problems (assessment of cardiovascular risk)									
20	Congestive heart failure, or use of medication									
21	Diagnosis of Type 2 diabetes									
22	Medication for Type 2 diabetes									
23	How well the pancreas produces insulin (ß-cell function)									
24	Elevated fat and cholesterol in the blood, or use of medication (dyslipidemia)									
25	Problems with breathing during sleep (obstructive sleep apnoea)									
26	Ability to fall asleep at night or quality of sleep (sleep disorders other than sleep apnoea)									
27	Joint disease, or use of medication, or being considered for joint replacement									
28	Long standing acid reflux, or use of medication (gastro-esophageal reflux or GERD)									
29	Bladder problems (urinary incontinence)									
30	Long standing diseases of the lungs such as asthma (chronic pulmonary disease)									
31	Thyroid function, or use of medication (hypothyroidism)									

32	Obesity-related liver disease, e.g., non-alcoholic fatty liver disease
33	Male or female reproductive function, e.g., polycystic ovary syndrome, infertility (reproductive dysfunction)
34	Long standing fluid retention (lymphedema)
35	Abnormal accumulation of fat in legs/arms (lipedema)
	ii. Mental health status assessed by a health professional (Note: patient-reported mental health will be measured separately)
36	Suicidal thoughts
37	Binge eating
38	Depression, or use of medication
39	Feelings towards one's body shape or appearance (body dysmorphia/dysmorphic disorder)
40	Addictive behaviours, e.g., alcohol, gambling, illicit drugs
41	Anger management problems
	iii. Anthropometric (body measurement) data
42	Weight
43	Body shape, e.g., waist and hip measurements
	iv. Lifestyle data
44	Alcohol
45	Smoking
46	Employment
47	Changes in family and relationship
	v. Other outcomes
48	Changes in gut microbiota (gut flora)
49	Use of weight loss medication
50	For this core set (Set 2 - Effectiveness outcomes), if there is anything else you think is <i>critical</i> to include in a bariatric surgery registry, please specify

Set 3a: Surgical procedure information (surgeons only)

This section lists information related specifically to the surgical procedure. These items are measured <u>only once</u> around the time of surgery.

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder:** 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'.

	i. General surgical information									
51	Pre-operative assessment of surgical risk, e.g., OS-MRS score or similar	1 Unal	2 ble to	3 answ	4 er	5	6	7	8	9
52	Length of time spent on the waiting list for surgery									
53	Length of time spent in hospital after admission for surgery									
54	Name of surgical procedure, e.g., sleeve gastrectomy, one-anastomosis gastric bypass									
55	Surgical approach to gain access, e.g., laparoscopic, open or endoscopic									
	ii. Stapling/suturing procedures									
56	Height of staples used									
57	Make of stapler used									
58	Type of reinforcement used									
59	Size of bougie									
60	Distance between resection and pylorus (for sleeve gastrectomy only)									
61	Hiatus hernia repair undertaken									
62	Closure of hernia defects undertaken (not for sleeve gastrectomy)									
63	Measurements of limb length (not for sleeve gastrectomy)									
	iii. Device procedures									
64	Type/make of device (including band and balloon, adjustable or non-adjustable)									
65	Method of balloon placement, e.g., swallowed or endoscopically placed									
66	Fill volume of balloon									
67	Duration of balloon implantation (when removed)									
68	For this core set (Set 3a – Procedural information), if there is anything else you think is <i>critical</i> to include in a bariatric surgery registry, please specify									

Set 3b: Potential complications and side-effects of surgery

The following section lists events that may occur <u>during or after</u> bariatric surgery. Please note, these are only possibilities and do not occur in everyone.

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder**: 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'.

For each item (where applicable), please also indicate the timepoints you consider are critical to measure this variable (tick all that are critical)

	i. Death									
69	Death from surgical complications whilst still in hospital (in-hospital mortality)	1 U	2 nable		4 er	5	6	7	8	9
	In addition to baseline, which time point(s) after surgery is the most important, relevant to this item? (tick all that apply)	6 weeks, 1 year, 2 years, 5 years, 5-10 years, mo than 10 years, other		nore						
	Other (please specify)									
70	Death after discharge from hospital (post-discharge mortality)									
71	Cause of death									
	ii. Technical complications of stapling/suturing procedures									
72	Problems with anastomotic/staple line/suture line including subsequent infections									
73	Obstruction including ileus and/or hernia									
	iii. Technical complications related to operations using devices									
74	Complications that may occur shortly after the operation, when the patient is still in hospital									
75	Complications that occur sometime after the operation, once the patient has been discharged									
	iv. General complications of surgery (early post-operative period)									
76	Accidental damage to other organs during surgery (organ injury)									
77	Bleeding inside the body (intra-abdominal or endoluminal)									
78	Problems with the heart, vessels, or blood clots (cardiovascular problems or venous thromboembolism)									
79	Problems with the kidneys, including rhabdomyolysis (renal problems)									
80	Problems with gastric and/or stomal ulcers									
81	Unplanned use of high dependency, intensive care or critical care units									

82	Liver problems	
83	Feeling sick or vomiting (nausea)	
84	Whether a re-intervention occurred, including a classification of its severity, e.g., Clavien-Dindo or similar	
	v. Side effects of surgery (longer-term)	
85	Pain or discomfort in the body	
86	Problems with bowel movements/flatulence	
87	Problems swallowing or bringing food back up (dysphagia/regurgitation)	
88	Skin problems or irritations, e.g., rashes, sores, loose skin or ulcers or exacerbation of existing skin problems	
89	When food moves too quickly from the stomach into the small intestine causing symptoms such as cramps, diarrhea, nausea, feeling hot and sweaty (dumping syndrome)	
90	Problems with gallstones	
91	Problems with drops in blood sugar after a meal (reactive hypoglycaemia)	
92	Problems in bone strength (bone density)	
93	Problems with teeth	
94	Hair loss	
95	Problems with kidney stones	
96	Leg cramps	
97	Problems with immune system, e.g., recurrent infections	
	vi. Nutritional outcomes	
98	The amount and type of food patients consume (nutritional intake)	
99	Vitamin and mineral levels	
100	Clinical malnutrition	
101	For this core set (Set 3b – Potential complications and side effects of surgery), if there is anything else you think is <i>critical</i> to include in a bariatric surgery registry, please specify	
	You have now finished the survey. Thank you for your time and support with this study. We will be in contact in a few weeks with the second survey.	

Questionnaire - Round 2 (A) - Basic Feedback

A1 Unique citation ID

Development of CORE SETS for registries to monitor and evaluate bariatric surgery – Round 2

Welcome to the International Bariatric Surgery Registry project

Thank you for taking part of Round 1 of the survey earlier this year. This is the final of two surveys where we will ask you to rate which information (data items) you think are **critical** to be measured and reported in a bariatric surgery registry as part of core sets. If you'd like a reminder of the study information, please click here [insert link]

[Information from Round 1 to be included in link:]

[The International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) has set up a global registry project to allow for monitoring and comparisons of obesity and bariatric surgery on an international level, with the aim of improving patient care. Agreed standardised sets of information, also known as 'core sets', will optimise comparisons. Core sets include the information that should be measured and reported as a minimum in all evaluations of a particular intervention.

We are proposing 3 core sets, each representing a different time point at which information is collected in the registry.

Core set 1 (baseline information) will focus on information that is collected <u>only once before</u> surgery (baseline)

Core set 2 (effectiveness outcomes) will focus on information used to measure the impact or effectiveness of bariatric surgery - measured both before and after surgery

Core set 3 (surgical information) will focus on information measured <u>during or after</u> surgery, including information about the surgical procedure (Set 3a - surgeons only) and potential complications and side-effects of surgery (Set 3b)

Consensus among expert stakeholders (i.e. you) working in the field of bariatric surgery on the minimum core information to measure in each set in the registry is now needed.]

The survey items are written in plain language, followed by medical terminology in brackets (where relevant).

In this round, we have included your scores from Round 1 as well as the scores of your peer group and other health professional groups.

Please re-rate each item, considering the scores from Round 1. As a reminder, each item is rated on a Likert scale of 1-9. A score of 7-9 indicates an item that is of critical importance, 4-6 an item that is important but not critical and 1-3 an item of limited importance.

PLEASE NOTE: when rating items, please remember that the core sets represent the *minimum* that should be included in all bariatric registries internationally to allow comparisons. Development of the core sets will not preclude other information being collected in the registry.

Core Set 1: Baseline only information

This includes items that are measured <u>only once before</u> surgery (at baseline).

Please rate how **critical** you think it is that the following items are measured before surgery and recorded in a bariatric surgery registry. Select the number that best represents your opinion. **Reminder:** 7-9 'critical importance', 4-6 'important but not critical', 1-3 'limited importance'. If you feel unable to rate any of the items, please tick 'unable to answer'. Round 1 scores are provided for your information.

i. Administrative information	Your Round	[Professional group] Round 1	All other	7	Q	ر 0	-	,	U	
1. Administrative information		<u> </u>	professions	l '		9				
	1 score	score	•	Unal	ble to	answ	er			

		Round 1
		score
1	Source of funding to pay for the surgery, e.g., private health care insurance, public funding/national health service, self-paying	
2	Date on which the patient was referred for surgery	
3	Details of which members of the multi-disciplinary team have been involved with the patient to date	
	ii. Patient demographics	
4	Sex of the patient	
5	Age of the patient	
6	Ethnicity of the patient	
7	Educational level of the patient	
8	Ability of patient to purchase/afford supplements for life, post-surgery	
	iii. Clinical history	
9	Height of the patient	
10	History of any previous bariatric surgery	
11	History of any previous abdominal surgery (other than bariatric surgery)	
12	Weight history	
13	Details of previous weight loss programs	
14	Time period over which pre-surgery weight loss occurred	
15	Duration of type 2 diabetes	
16	Other medical conditions not directly related to obesity e.g., type 1 diabetes, organ transplantation, dementia	
17	Medication history	

Core Set 2: Effectiveness outcomes

This includes items that may be measured <u>both before and after surgery</u> to <u>measure the impact or effectiveness</u> of bariatric surgery.

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder:** 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'. Round 1 scores are provided for your information.

	i. Obesity-related disease	Your Round 1 score	[Professional group] Round 1 score	All other professions Round 1 score	1 7 Una	2 8 ble to	3 9 answ	4 er	5	6
18	Abnormal or irregular heartbeat, or use of medication (arrhythmia)									
19	High blood pressure, or use of blood pressure medication (hypertension)									
20	Risk of future heart and vascular problems (assessment of cardiovascular risk)									
21	Congestive heart failure, or use of medication									
22	Diagnosis of Type 2 diabetes									
23	Medication for Type 2 diabetes									
24	How well the pancreas produces insulin (ß-cell function)									
25	Elevated fat and cholesterol in the blood, or use of medication (dyslipidemia)									
26	Problems with breathing during sleep (obstructive sleep apnoea)									
27	Ability to fall asleep at night or quality of sleep (sleep disorders other than sleep apnoea)									
28	Joint disease, or use of medication, or being considered for joint replacement									
29	Long standing acid reflux, or use of medication (gastro-esophageal reflux or GERD)									
30	Bladder problems (urinary incontinence)									
31	Long standing diseases of the lungs such as asthma (chronic pulmonary disease)									
32	Thyroid function, or use of medication (hypothyroidism)									
33	Obesity-related liver disease, e.g., non-alcoholic fatty liver disease									
34	Male or female reproductive function, e.g., polycystic ovary syndrome, infertility (reproductive dysfunction)									
35	Long standing fluid retention (lymphedema)									

36	Abnormal accumulation of fat in legs/arms (lipedema)
	ii. Mental health status assessed by a health professional (Note: patient-reported mental health will be measured separately)
37	Suicidal thoughts
38	Binge eating
39	Depression, or use of medication
40	Feelings towards one's body shape or appearance (body dysmorphia/dysmorphic disorder)
41	Addictive behaviours, e.g., alcohol, gambling, illicit drugs
42	Anger management problems
	iii. Anthropometric (body measurement) data
43	Weight
44	Body shape, e.g., waist and hip measurements
	iv. Lifestyle data
45	Alcohol
46	Smoking
47	Employment
48	Changes in family and relationship
49	Physical activity levels
	v. Other outcomes
50	Changes in gut microbiota (gut flora)
51	Use of weight loss medication
	Set 3a: Surgical procedure information (surgeons only)

This section lists information related specifically to the surgical procedure. These items are measured *only once* around the time of surgery.

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder:** 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'. Round 1 scores are provided for your information.

	i. General surgical information	Your Round 1 score	Surgeons group Round 1 score	1 2 3 4 5 6 7 8 9 Unable to answer
52	Pre-operative assessment of surgical risk, e.g., OS-MRS score or similar			
53	Length of time spent on the waiting list for surgery			
54	Length of time spent in hospital after admission for surgery			
55	Name of surgical procedure, e.g., sleeve gastrectomy, one-anastomosis gastric bypass			
56	Surgical approach to gain access, e.g., laparoscopic, open or endoscopic			
	ii. Stapling/suturing procedures			
57	Height of staples used			
58	Make of stapler used			
59	Type of reinforcement used			
60	Size of bougie			
61	Distance between resection and pylorus (for sleeve gastrectomy only)			
62	Hiatus hernia repair undertaken			
63	Closure of hernia defects undertaken (not for sleeve gastrectomy)			
64	Measurements of limb length (not for sleeve gastrectomy)			
	iii. Device procedures			
65	Type/make of device (including band and balloon, adjustable or non-adjustable)			
66	Method of balloon placement, e.g., swallowed or endoscopically placed			
67	Fill volume of balloon			
68	Duration of balloon implantation (when removed)			

Set 3b: Potential complications and side-effects of surgery

The following section lists events that may occur <u>during or after</u> bariatric surgery. Please note, these are only possibilities and do not occur in everyone.

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder**: 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'.

Round 1 scores are provided for your information.

	i. Death	Your Round 1 score	[Professional group] Round 1 score	All other professions Round 1 score	1 8 Una	2 9 ble to	3 answ	4 ver	5	6	7
69	Death from surgical complications whilst still in hospital (in-hospital mortality)										
70	Death after discharge from hospital (post-discharge mortality)										
71	Cause of death										
	ii. Technical complications of stapling/suturing procedures										
72	Problems with anastomotic/staple line/suture line including subsequent infections										
73	Obstruction including ileus and/or hernia										
	iii. Technical complications related to operations using devices										
74	Complications that may occur shortly after the operation, when the patient is still in hospital										
75	Complications that occur sometime after the operation, once the patient has been discharged										
	iv. General complications of surgery (early post-operative period)										
76	Accidental damage to other organs during surgery (organ injury)										
77	Bleeding inside the body (intra-abdominal or endoluminal)										
78	Problems with the heart, vessels, or blood clots (cardiovascular problems or venous thromboembolism)										
79	Problems with the kidneys, including rhabdomyolysis (renal problems)										
80	Problems with gastric and/or stomal ulcers										
81	Unplanned use of high dependency, intensive care or critical care units										
82	Liver problems										

83	Feeling sick or vomiting (nausea)	
84	Whether a re-intervention occurred, including a classification of its severity, e.g., Clavien-Dindo or similar	
	v. Side effects of surgery (longer-term)	
85	Pain or discomfort in the body	
86	Problems with bowel movements/flatulence	
87	Problems swallowing or bringing food back up (dysphagia/regurgitation)	
88	Skin problems or irritations, e.g., rashes, sores, loose skin or ulcers or exacerbation of existing skin problems	
89	When food moves too quickly from the stomach into the small intestine causing symptoms such as cramps, diarrhea, nausea, feeling hot and sweaty (dumping syndrome)	
90	Problems with gallstones	
91	Problems with drops in blood sugar after a meal (reactive hypoglycaemia)	
92	Problems in bone strength (bone density)	
93	Problems with teeth	
94	Hair loss	
95	Problems with kidney stones	
96	Leg cramps	
97	Problems with immune system, e.g., recurrent infections	
	vi. Nutritional outcomes	
98	The amount and type of food patients consume (nutritional intake)	
99	Vitamin and mineral levels	
100	Clinical malnutrition	
	We will be inviting a sample of multidisciplinary bariatric health professionals to	
	take part in an online consensus meeting on [date] to finalise the core outcome	
101	set. If you are interested in being invited to this, please tick this box. Ticking the	
	box does not commit you to taking part in the meeting. Should you receive an	
	invitation to the consensus meeting, you are free to decline participation.	

Questionnaire – Round 2 (B) – Extended feedback

A1 Unique citation ID

Development of CORE SETS for registries to monitor and evaluate bariatric surgery – Round 2

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Thank you for taking part of Round 1 of the survey earlier this year. This is the final of two surveys where we will ask you to rate which information (data items) you think are **critical** to be measured and reported in a bariatric surgery registry as part of core sets. If you'd like a reminder of the study information, please click here [insert link].

[Information from Round 1 to be included in link:]

[The International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) has set up a global registry project to allow for monitoring and comparisons of obesity and bariatric surgery on an international level, with the aim of improving patient care. Agreed standardised sets of information, also known as 'core sets', will optimise comparisons. Core sets include the information that should be measured and reported as a minimum in all evaluations of a particular intervention.

We are proposing 3 core sets, each representing a different time point at which information is collected in the registry.

Core set 1 (baseline information) will focus on information that is collected <u>only once before</u> surgery (baseline)

Core set 2 (effectiveness outcomes) will focus on information used to measure the impact or effectiveness of bariatric surgery - measured both before and after surgery

Core set 3 (surgical information) will focus on information measured <u>during or after</u> surgery, including information about the surgical procedure (Set 3a - surgeons only) and potential complications and side-effects of surgery (Set 3b)

Consensus among expert stakeholders (i.e. you) working in the field of bariatric surgery on the minimum core information to measure in each set in the registry is now needed.]

The survey items are written in plain language, followed by medical terminology in brackets (where relevant).

In this round, we have included the top 5 rated items from Round 1 for each of the survey sections. We have also included your scores from Round 1 as well as the scores of your peer group and other health professional groups. Please re-rate each item, considering the results and scores from Round 1. As a reminder, each item is rated on a Likert scale of 1-9. A score of 7-9 indicates an item that is of critical importance, 4-6 an item that is important but not critical and 1-3 an item of limited importance.

PLEASE NOTE: when rating items, please remember that the core sets represent the *minimum* that should be included in all bariatric registries internationally to allow comparisons. Development of the core sets will not preclude other information being collected in the registry.

Core Set 1: Baseline only information

This includes items that are measured <u>only once before</u> surgery (at baseline).

Top five items from Round 1:

- 1. [insert item]
- 2. [insert item]
- 3. [insert item]
- 4. [insert item]

5. [insert item]

Please rate how **critical** you think it is that the following items are measured before surgery and recorded in a bariatric surgery registry. Select the number that best represents your opinion. **Reminder:** 7-9 'critical importance', 4-6 'important but not critical', 1-3 'limited importance'. If you feel unable to rate any of the items, please tick 'unable to answer'. Round 1 scores are provided for your information.

	i. Administrative information	Your Round 1 score	[Professional group] Round 1 score	All other professions Round 1 score	1 7 Unab	2 3 8 9 le to an)	1 5	6
1	Source of funding to pay for the surgery, e.g., private health care insurance, public funding/national health service, self-paying								
2	Date on which the patient was referred for surgery								
3	Details of which members of the multi-disciplinary team have been involved with the patient to date								
	ii. Patient demographics								
4	Sex of the patient								
5	Age of the patient								
6	Ethnicity of the patient								
7	Educational level of the patient								
8	Ability of patient to purchase/afford supplements for life, post-surgery								
	iii. Clinical history								
9	Height of the patient								
10	History of any previous bariatric surgery								
11	History of any previous abdominal surgery (other than bariatric surgery)								
12	Weight history								
13	Details of previous weight loss programs								
14	Time period over which any pre-surgery weight loss occurred								
15	Duration of type 2 diabetes								
16	Other medical conditions not directly related to obesity e.g., type 1 diabetes, organ transplantation, dementia								

|--|

Core Set 2: Effectiveness outcomes

This includes items that may be measured <u>both before and after surgery</u> to <u>measure the impact or effectiveness</u> of bariatric surgery.

Top five items from Round 1:

- 1. [insert item]
- 2. [insert item]
- 3. [insert item]
- 4. [insert item]
- 5. [insert item]

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder:** 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'.

Round 1 scores are provided for your information.

	i. Obesity-related disease	Your Round 1 score	[Professional group] Round 1 score	All other professions Round 1 score	1 7 Un	2 8 able to	3 9 answ	4 er	5	6
18	Abnormal or irregular heartbeat, or use of medication (arrhythmia)									
19	High blood pressure, or use of blood pressure medication (hypertension)									
20	Risk of future heart and vascular problems (assessment of cardiovascular risk)									
21	Congestive heart failure, or use of medication									
22	Diagnosis of Type 2 diabetes									
23	Medication for Type 2 diabetes									
24	How well the pancreas produces insulin (ß-cell function)									
25	Elevated fat and cholesterol in the blood, or use of medication (dyslipidemia)									
26	Problems with breathing during sleep (obstructive sleep apnoea)									
27	Ability to fall asleep at night or quality of sleep (sleep disorders other than sleep apnoea)									
28	Joint disease, or use of medication, or being considered for joint replacement									
29	Long standing acid reflux, or use of medication (gastro-esophageal reflux or GERD)									
30	Bladder problems (urinary incontinence)									

Lang standing diseases of the lungs such as asthma (abrenia nulmanary disease)
Long standing diseases of the lungs such as asthma (chronic pulmonary disease)
Thyroid function, or use of medication (hypothyroidism)
Obesity-related liver disease, e.g., non-alcoholic fatty liver disease
Male or female reproductive function, e.g., polycystic ovary syndrome, infertility (reproductive dysfunction)
Long standing fluid retention (lymphedema)
Abnormal accumulation of fat in legs/arms (lipedema)
ii. Mental health status assessed by a health professional (Note: patient-reported mental health will be measured separately)
Suicidal thoughts
Binge eating
Depression, or use of medication
Feelings towards one's body shape or appearance (body dysmorphia/dysmorphic disorder)
Addictive behaviours, e.g., alcohol, gambling, illicit drugs
Anger management problems
iii. Anthropometric (body measurement) data
Weight
Body shape, e.g., waist and hip measurements
iv. Lifestyle data
Alcohol
Smoking
Employment
Changes in family and relationship
Physical activity levels
v. Other outcomes
Changes in gut microbiota (gut flora)
Use of weight loss medication

Set 3a: Surgical procedure information (surgeons only)

This section lists information related specifically to the surgical procedure. These items are measured *only once* around the time of surgery.

Top five items from Round 1:

- 1. [insert item]
- 2. [insert item]
- 3. [insert item]
- 4. [insert item]
- 5. [insert item]

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder:** 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'. Round 1 scores are provided for your information.

	i. General surgical information	Your Round 1 score	Surgeons group Round 1 score	1 Una	2 ble to	3 answ	4 er	5	6	7	8	9	
52	Pre-operative assessment of surgical risk, e.g., OS-MRS score or similar												
53	Length of time spent on the waiting list for surgery												
54	Length of time spent in hospital after admission for surgery												
55	Name of surgical procedure, e.g., sleeve gastrectomy, one-anastomosis gastric bypass												
56	Surgical approach to gain access, e.g., laparoscopic, open or endoscopic												
	ii. Stapling/suturing procedures												
57	Height of staples used												
58	Make of stapler used												
59	Type of reinforcement used												
60	Size of bougie												
61	Distance between resection and pylorus (for sleeve gastrectomy only)												
62	Hiatus hernia repair undertaken												
63	Closure of hernia defects undertaken (not for sleeve gastrectomy)												

64	Measurements of limb length (not for sleeve gastrectomy)	
	iii. Device procedures	
65	Type/make of device (including band and balloon, adjustable or non-adjustable)	
66	Method of balloon placement, e.g., swallowed or endoscopically placed	
67	Fill volume of balloon	
68	Duration of balloon implantation (when removed)	

Set 3b: Potential complications and side-effects of surgery

The following section lists events that may occur <u>during or after</u> bariatric surgery. Please note, these are only possibilities and do not occur in everyone.

Top five items from Round 1:

- 1. [insert item]
- 2. [insert item]
- 3. [insert item]
- 4. [insert item]
- 5. [insert item]

Please rate how **critical** you think it is that the following items are measured in bariatric surgical registries. Select the number that best represents your opinion. **Reminder**: 7-9 critical importance, 4-6 important but not critical, 1-3 limited importance. If you feel unable to rate any of the items, please tick 'unable to answer'. Round 1 scores are provided for your information.

	i. Death	Your Round 1 score	[Professional group] Round 1 score	All other professions Round 1 score	1 8 Una	2 9 ble to	3 answ	4 er	5	6	7
69	Death from surgical complications whilst still in hospital (in-hospital mortality)										
70	Death after discharge from hospital (post-discharge mortality)										
71	Cause of death										
	ii. Technical complications of stapling/suturing procedures										
72	Problems with anastomotic/staple line/suture line including subsequent infections										
73	Obstruction including ileus and/or hernia										
	iii. Technical complications related to operations using devices										

74	Complications that may occur shortly after the operation, when the patient is still in hospital
75	Complications that occur sometime after the operation, once the patient has been discharged
	iv. General complications of surgery (early post-operative period)
76	Accidental damage to other organs during surgery (organ injury)
77	Bleeding inside the body (intra-abdominal or endoluminal)
78	Problems with the heart, vessels, or blood clots (cardiovascular problems or venous thromboembolism)
79	Problems with the kidneys, including rhabdomyolysis (renal problems)
80	Problems with gastric and/or stomal ulcers
81	Unplanned use of high dependency, intensive care or critical care units
82	Liver problems
83	Feeling sick or vomiting (nausea)
84	Whether a re-intervention occurred, including a classification of its severity, e.g., Clavien-Dindo or similar
	v. Side effects of surgery (longer-term)
85	Pain or discomfort in the body
86	Problems with bowel movements/flatulence
87	Problems swallowing or bringing food back up (dysphagia/regurgitation)
88	Skin problems or irritations, e.g., rashes, sores, loose skin or ulcers or exacerbation of existing skin problems
89	When food moves too quickly from the stomach into the small intestine causing symptoms such as cramps, diarrhea, nausea, feeling hot and sweaty (dumping syndrome)
90	Problems with gallstones
91	Problems with drops in blood sugar after a meal (reactive hypoglycaemia)
92	Problems in bone strength (bone density)
93	Problems with teeth
94	Hair loss
95	Problems with kidney stones
96	Leg cramps

97	Problems with immune system, e.g., recurrent infections
	vi. Nutritional outcomes
98	The amount and type of food patients consume (nutritional intake)
99	Vitamin and mineral levels
100	Clinical malnutrition
101	We will be inviting a sample of multidisciplinary bariatric health professionals to take part in an online consensus meeting on [date] to finalise the core outcome set. If you are interested in being invited to this, please tick this box. Ticking the box does not commit you to taking part in the meeting. Should you receive an invitation to the consensus meeting, you are free to decline participation. You have now finished the survey. Thank you for your time and support with this study.