Bariatric Surgery

2015 (November) – Day 2, Q1 Compulsory (data)

Medical Leader	
Medical Expert	•
Communicator	•
Advocate	
Scholar	✓
Professional	•
Collaborator	
Manager	•

You are a medical administrator who has recently been seconded for a one year period from your local District Health Board to your national Department / Ministry of Health to work on some special projects.

The Deputy Director of the Department / Ministry of Health provides you with the following preliminary data for a study that has been gathered on Bariatric Surgery. In your jurisdiction for the last financial year (2014/15) there were 4,250 bariatric procedures performed in 115 hospitals. There are 5 graphs/tables attached. All hospitals that performed 10 or less bariatric procedures a year only had one surgeon who performed that type of surgery. Generally, hospitals that performed 50+ procedures a year had two or more surgeons performing bariatric surgery.

The Deputy Director asks you to have a look at these items and provide your initial thoughts and observations to help understand why variation occurs in your nation. In particular, you are asked to focus on sleeve gastrectomies and the surgery that is performed in Hospitals A, B, C, D & E.

Note that Surgeon Dr. XYZ operates at both hospitals A and C.

Questions:

1. What is your initial observation about bariatric surgery and the variation in all of the tables?
2. Which of the five identified hospitals would you be most concerned about and why?
3. Is the high admission rate to ICU at Hospital E a concern?
4. What are your comments about hospitals A & D?
5. Might there be any concerns about where Dr. XYZ operates?
6. What additional information might you suggest could be gathered to better understand possible adverse patient outcomes?
7. If this report was made ‘public’ – would it cause any significant concerns?

Table 1. Bariatric Surgical Procedure Description and Separation for 2014/15.

Procedure Code	Procedure Description	Separations
569	Adjustable gastric band, placement of, with or without crural repair taking 45 minutes or less, for a patient with clinically severe obesity	748
570	Sleeve gastrectomy, with or without crural repair taking 45 minutes or less, for a patient with clinically severe obesity	2,215
571	Surgical reversal of adjustable gastric banding (removal or replacement of gastric band), gastric bypass, gastroplasty (excluding by gastric plication) or biliopancreatic diversion	937
572	Other bariatric procedures	350
Total		4,250

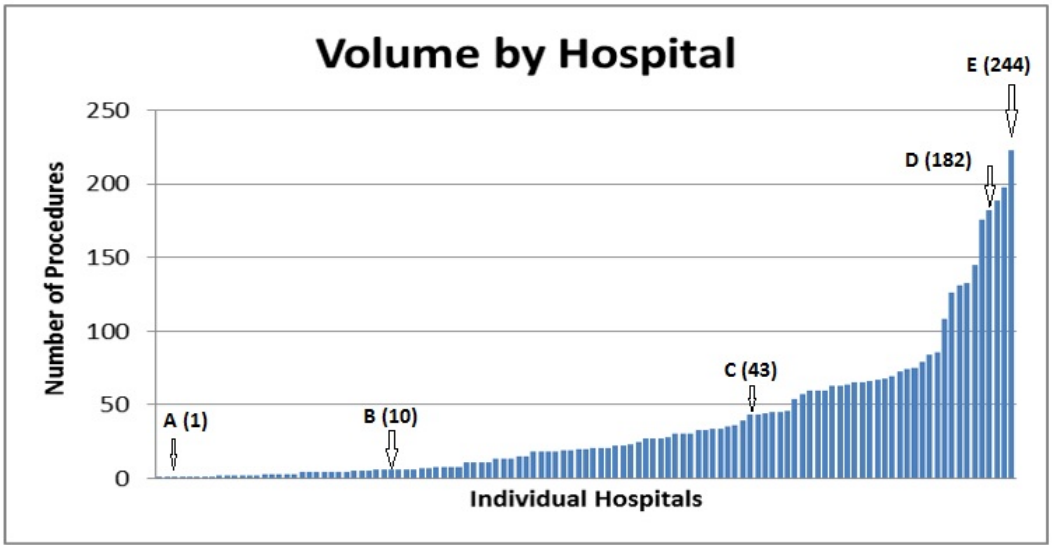
Table 2. Patient characteristics for the different procedures

Procedure Code	Volume	Average Age	Average of LoS (days)	Average Theatre Time (min)
569	748	43	1.2	75
570	2,215	43	2.9	107
571	937	47	2.1	88
572	350	46	2.2	55
Grand Total	4,250	44	2.5	97

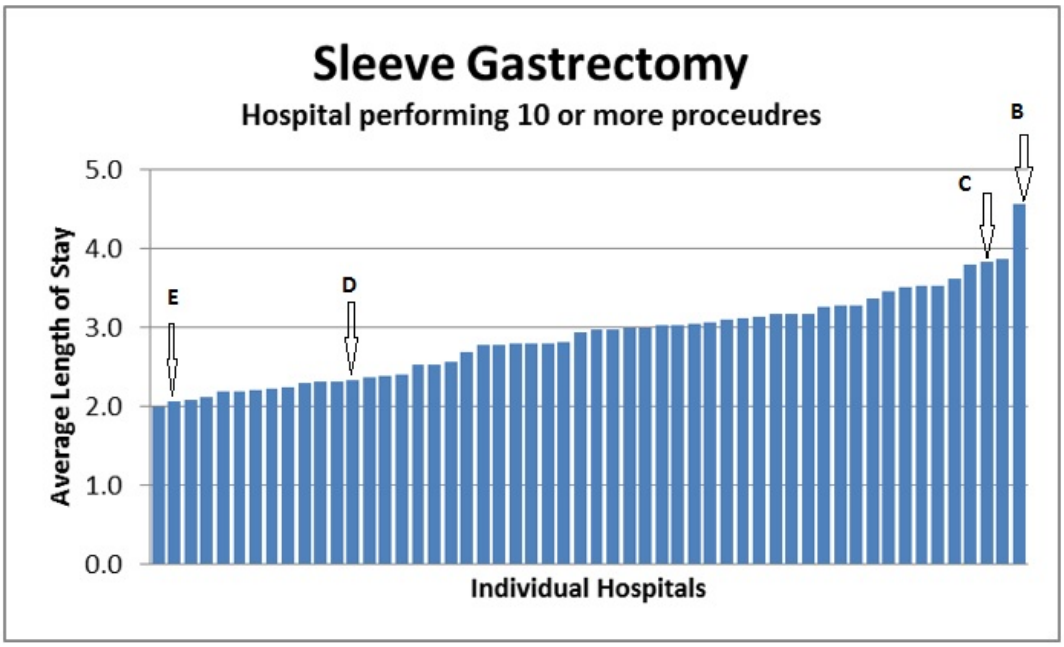
Table 3. ICU admission rate, infection rate, rehabilitation rate & readmit rate within 28 days for all procedure codes

Procedure Code	Volume	ICU rate	Infection rate	Rehab rate	Readmit within 28 days
569	748	1%	0%	1%	4%
570	2,215	7%	0%	0%	5%
571	937	4%	1%	1%	8%
572	350	24%	12%	11%	11%
Totals	**4,250**				

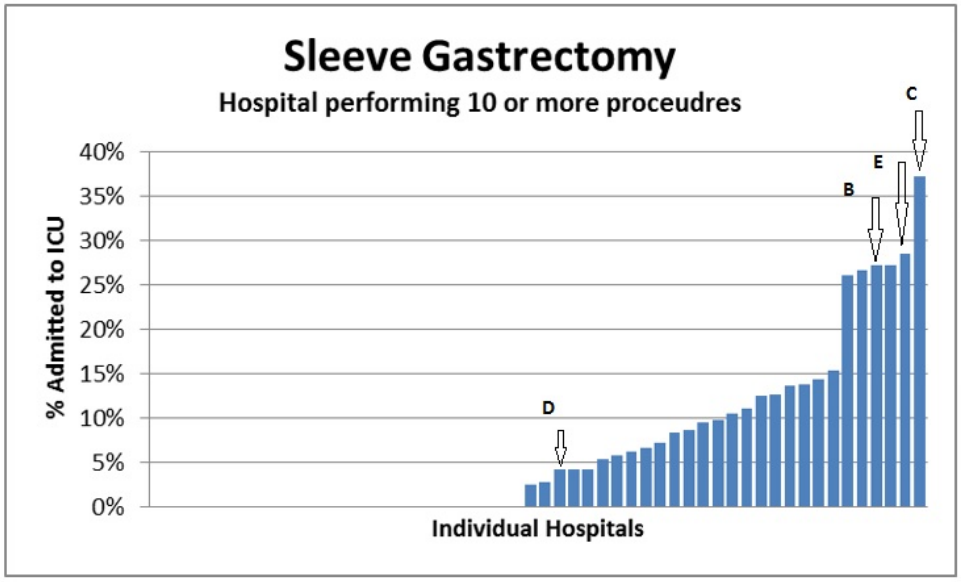
Graph1. Volume of procedures by all 115 hospitals



Graph 2. Data from the hospitals that performed 10 or more sleeve gastrectomy procedures



Graph 3. Percentage of patients admitted to ICU in Hospitals performing 10 or more Sleeve Gastrectomies


Sleeve Gastrectomy
Hospital performing 10 or more proceudres
% Admitted to ICU
40%
35%
30%
25%
20%
15%
10%
5%
0%
Individual Hospitals
A
B
C
D
E

Guidance for Censors

1. There is a large amount of bariatric surgery occurring with 52% being sleeve gastrectomy. There is wide variation in numbers between hospitals with many performing less than 10 a year- some only one or two cases a year. There is also a variation in length of stay, admission rates to ICU initially and then readmission rates.

   There has much been written in the literature about bariatric surgery highlighting the following issues:-

   - High morbidity and mortality rates related to obese and morbidly obese patients
   - Best results occur in hospitals that have specialised units with more than one experienced surgeon
   - Hospitals that provide the surgery should have appropriate equipment, procedures and staff that have been trained to manage such patients
2. You would be most worried about Hospital C. It is doing only 43 bariatric operations a year but has a higher length of stay ~3.8 days) and 37% of patients are admitted to ICU. You might also be worried about Hospital B. It has the highest length of stay (4.6 days) and is only doing 10 operations a year. You might also worry about Hospital A (and any other hospital that is doing less than 10 of these operations a year.
3. The high admission rate at Hospital E may or may not be a concern. It is doing a large number of surgeries and is probably a major hospital treating the most obese patients who have the highest morbidity profile. The patients are probably being correctly managed in the ICU. It may be a worry if one surgeon has a higher rate than others or if a readmission rate to ICU was high.
4. Hospital A is small and only did one case. It is hard to make any other statement as the other graphs only show data for hospitals that did more than 10 procedures. There is a need to 'burrow down' to see if there are problems or not. As mentioned above, there can be problems if a hospital is only doing a small number of cases each year. For Hospital D, no specific comments – it seems to be in the middle range of statistics.
5. There may be concern about where Dr XYZ operates. If he is the sole bariatric surgeon at Hospital C (which has high length of stay and high admission rate to ICU) it may be a problem in Hospital A which only does one procedure a year
6. If there are concerns about one or more hospitals or surgeons, it could be useful to do in depth clinical reviews including complication rates, complaints, post-operative outcomes at 30 or 60 days. The analysis would not be easy and could not be done by the candidate themselves. It would require a team effort by appropriately skilled staff such as epidemiologists, health information officers and clinicians. Some of the analysis may need to go beyond hospitals into the primary care setting. A good candidate should appreciate that the role they are in for this question should require them to understand that there will be Department staff to do much of the extra investigation work and they would have to act as a team leader rather than try and do all of the work them self.
7. The candidate should appreciate that this report if made public could cause considerable media and public interest as well as concern expressed by the surgeons involved. In particular, it may also influence what obese patients decide to do. The reputations of hospitals could also be at risk.

Assessment Rubric:

		Knowledge	Skills	Attitude/Behaviour
Poor	1	Candidate does not correctly give the answer to more than 2 of the questions even with prompting	Does not demonstrate that they are aware of the problems that bariatric surgery may cause in the wrong hospital setting	Does not demonstrate an understanding of why this could be of patient and community concern
Limited	2	Only correctly answers up to three questions with or without prompting, but with limited appreciation of why the situation is of concern	Does not indicate that they can effectively analyse the data and draw reasonable conclusions.	Demonstrates some understanding of the inter-related issues but does not do it in a competent manner.
Borderline	2.5	Attempts to answer all of the questions with or without prompting, but there are gaps of reasoning in two or more of the answers and they cannot clearly explain that they understand the significance of all of their answers	Attempts to provide the answers that are required, but leaves the censors with the impression that would struggle to analyse simple data and communicate their observations effectively in a real life situation.	With or without prompting the candidate only demonstrates a limited understanding of the challenges of investigating such a complex topic.
Meets standard	3	Provides the basic answer to all seven questions.	Provides the answers to all seven questions knowing how all of the issues inter-relate.	Indicates that they understand that this is not an easy topic to investigate and that in the role they would need to assemble and lead a team to ensure the task is done appropriately.
Good	4	In addition to providing correct answers to all the questions, the candidate also indicates that they may be worried about all hospitals (not just A) that are only doing a few operations each year. Also explains coherent reasons as to what additional information could be gathered.	As well as providing the correct answers, the candidate demonstrates skills in being able to effectively present the answers in a fluent manner.	As well as meeting the above, the candidate demonstrates that full understanding of the sensitivities and issues that could arise from the release of such statistics and how it would have to be managed correctly. In particular should discuss the issues relating to credentialing general surgeons who do bariatric surgery in small numbers and the problems it may cause in hospitals that do infrequent bariatric surgery.
	5	Candidate indicates that they are fully across this topic from their reading of the literature or experience in managing such a situation.	Excellent display of presenting data and recommendations in a concise manner expected of a consultant medical administrator.	Shows exceptional skills in understanding and the explaining the role of a medical administrator in analysing data in such a setting and the correct follow up actions that should be considered.