

# Analysis of No Show Patients at Day Surgery Program in a Multidisciplinary 1500 Bedded Hospital

Albalawi, Abdulaziz A<sup>1</sup>; Althwaibi, Abdullah T<sup>2</sup>; Alghamdi, Ali H<sup>3</sup>

<sup>1</sup>Armed Forces Hospital in Jubail, Saudi Arabia.

<sup>2</sup>Armed Forces Hospital Southern Region

<sup>3</sup>Prince Mansour Military Hospital

Corresponding Author: Albalawi, Abdulaziz A

Received: 25/12/2016

Revised: 12/01/2017

Accepted: 17/01/2017

## ABSTRACT

**Aims:** To identify causes of patients not showing to their day surgery which will help to apply measures to reduce it.

**Settings and Design:** This is a cross-sectional study. All patients who didn't show on their elective surgery from January 2016 until June 2016 at our 1500 bedded hospital were prospectively enrolled in this study.

**Methods and Material:** A list of patients who didn't show on their surgery day from January 2016 until June 2016 was obtained. A clerk from operating room services contacted the patients through the phone using a form which included patient's name, gender, age, medical number, MRP, surgery department and reasons for no show.

**Statistical analysis used:** The collected data included the total number, gender, age, surgical specialties and reasons of no show were all entered into SPSS software for analysis. We calculated the number of scheduled cases and no show in each surgical division and compared the percentage of no show with gender and age groups. Pearson's chi-squared test was used to compare between reasons of no show with each surgical division.

**Results:** A total of (5704) patients in 12 departments were scheduled for elective surgeries during 6-month study period. 583 (10.2%) surgeries were cancelled, 200 patients out of 583 (34.4%) were cancelled because of no show.

(36%) didn't answer when confirming the surgery, (30%) had personal reason, (16%) were sick, (9%) claimed that their surgery was cancelled by the hospital, (8%) forgot their surgery appointment, 2 (1%) had their surgeries done elsewhere.

**Conclusions:** We believe that many of no show cases were potentially avoidable and we must take actions to reduce it by addressing each problem beginning with the initial booking and patient notification along with developing improved methods to ensure attendance.

**Key-words:** Cancellation, no show, Operation room, Elective Surgery

**Key Messages:** These no shows have a negative impact on our hospital financially since we have lost 200 slots and lead to unnecessary loss of our staff working hours. In addition, these non-attendees may have prevented other deserving patients to be put on the surgical lists.

## INTRODUCTION

Our hospital is a multidisciplinary 1500 bedded hospital and one of the largest

tertiary referral center in Saudi Arabia. Day surgery unit covers around 60 percent of the scheduled operation time in the organization

and there is not yet any published data on causes of no show patients on day of surgery unit.

No show is a new topic that we are looking at our hospital to see if we are different from other institute. No show will result in cancellation of scheduled operations at the last minute which of major concern especially if you have long waiting list. These cancellations will result in inadequate loss of operating-room time. [1] In addition to increase the financial expenses on the hospital. [2] No show situation has clinical consequences not only to the patient but also on others who could have benefited from the appointment if the hospital was aware of this sudden cancellation. As domino effect this will lead to an expansion of waiting list in different clinical service which can compromise quality of health care. [3]

Major hospitals invest tremendous effort to run the operating room by having team of surgeons, anesthesiologists, and supporting staff available on previously agreed schedule. Significant amount of preparation is done by multiple departments just to avoid unwanted cancellation. A study done in Stanford University Hospital reported that 90% of operating room cancellations are day of surgery cancellations. [4] Also in a study was done at a pediatric hospital in Melbourne, Australia reported that 65% of day of surgery cancellation were patient initiated. [5]

It was estimated that the financial expenses of OR time calculated to be 8.00\$/min and each cancellation might cost the hospital around 776\$. [6]

We will focus in NO show patients in our study which is an important national problem that could be addressed and analyzed carefully. Limiting the no shows will help to optimize and increase the efficiency of operating rooms, reducing the financial expenses on the hospital and in addition to save wasted time caused for surgeons and operating staff. [7]

## **MATERIALS AND METHODS**

This is a cross-sectional study. This is a cross-sectional study. All patients who didn't show on their elective surgery at our 1500 bedded hospital were prospectively enrolled in this study. Data were collected for a period of six months from January 2016 until June 2016 after it has been approved by the Ethical committee of this institution.

Daily reports were obtained from operating room services with a list of patients who didn't show on their surgery day in twelve departments which included Ophthalmology surgery, ENT, General surgery, Pediatric general surgery, Orthopedic Surgery, Pediatric Orthopedic, Plastic, Oral & Maxillofacial, Vascular, Urology, OB/GYN, and Thoracic surgery

A form was given to a clerk from operating room services which included patient's name, gender, age, medical number, MRP, surgical specialties and reasons for no show. The clerk contacted the no show patients on daily basis through the phone to fill the forms. The collected data were all entered into excel sheet and then transformed into SPSS software for analysis. We calculated the number of scheduled cases and no show in each surgical division and we compared the percentages of no show with gender and age groups. Pearson's chi-squared test was used to compare between reasons of no show with each surgical division.

## **RESULTS**

Total of (5704) patients in 12 departments were scheduled for elective surgeries during six-month study period. The total number of surgical operations performed was 5121. The total number of patients who cancelled on the day of surgery was 583 (10.2%), 200 patients out of 583 (34.4%) were cancelled because of no show. Reasons for no show were grouped into five categories: No answer, personal reasons, sickness, cancelled, forgetfulness and surgery done elsewhere.

Seventy four patients out of 200 (36%) didn't answer when confirming the

surgery, 59 patients (30%) had personal reason, 32 (16%) were unable to attend surgery because of sickness, 17 (9%) didn't show claiming that their surgery was cancelled by the hospital, 16 (8%) forgot their surgery appointment, 2 (1%) had their surgeries done elsewhere.

Age groups are Pediatric [1-15] years old, Adult [16-60] years old and Elderly above 60 years old. 81% of no show was pediatric age group and 19% was elderly. There was no incident of no show among adult age group.

From the total 200 no show patients, we found greater no show within males 129 (65%) compared to 71 (35%) Females.

[Table 1] Shows specialty-wise distribution of cases. ENT had the highest number of cases scheduled for operation, 1379 (24.2%) followed by ophthalmology 1264 (22.2%), general surgery 1090 (19.1%), urology 429 (7.5%), pediatric general surgery 416 (7.3%), orthopedic 328 (5.8%), plastic 314 (5.5%), oral and maxillofacial 142 (2.5%),

OB/GYN 140 (2.5%), pediatric orthopedic 135 (2.4%), vascular 48 (0.8%) and thoracic 19 (0.4%).

**Table 1: Specialties distribution**

Division	No. of scheduled cases (%)
ENT	1379 (24.2)
Ophthalmology	1264 (22.2)
General Surgery	1090 (19.1)
Urology Surgery	429 (7.5)
Pediatric General Surgery	416 (7.3)
Orthopedic Surgery	328 (5.8)
Plastic	314 (5.5)
Oral & Maxillofacial	142 (2.5)
OB/GYN	140 (2.5)
PediatricOrthopedic	135 (2.4)
Vascular Surgery	48 (0.8)
Thoracic Surgery	19 (0.4)
<b>Total</b>	<b>5704</b>

[Table 2] shows the percentage of no show at each department. Vascular surgery had the highest percentage (16.6 %) followed by thoracic (10.5%), pediatric orthopedic (9.6%), pediatric general surgery (7.2%), orthopedic (5.8%), oral & maxillofacial (5.6%), ophthalmology (3.4%), ENT (2.7%), general surgery (2.3%), plastic (1.9%), urology (1.6%) and OB/GYN (1.4%)

**Table 2: Percentage of no show**

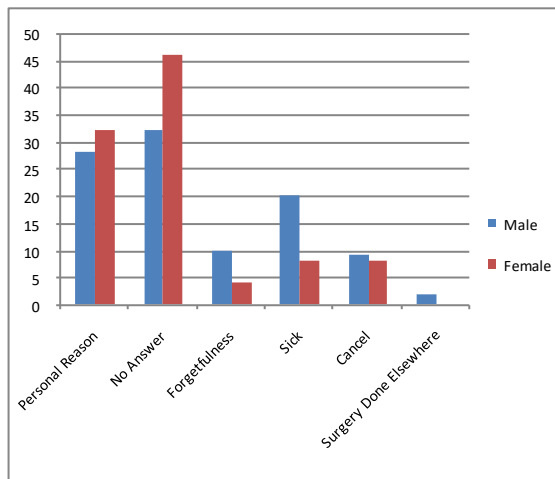
Division	No. of scheduled cases	No. of no show	Percentage of no show
Vascular Surgery	48	8	16.6
Thoracic Surgery	19	2	10.5
PediatricOrthopedic	135	13	9.6
Pediatric General Surgery	416	30	7.2
Orthopedic Surgery	328	19	5.8
Oral & Maxillofacial	142	8	5.6
Ophthalmology	1264	43	3.4
ENT	1379	37	2.7
General Surgery	1090	25	2.3
Plastic	314	6	1.9
Urology Surgery	429	7	1.6
OB/GYN	140	2	1.4
<b>Total</b>	<b>5704</b>	<b>200 (100)</b>	

[Table 3] is cross table shows percentage of no show reasons according to each department.

**Division\*Reason Cross table**

	Division	Reasons						Total
		No Answer	Personal Reason	Sick	Cancel	Forgetfulness	Surgery Done Elsewhere	
	Ophthalmology	16 (37)	11 (26)	5 (12)	8 (19)	2 (5)	1 (2)	43
	ENT	10 (27)	14 (38)	7 (19)	4 (11)	2 (5)	-	37
	Pediatric Surgery	13 (43)	6 (20)	7 (23)	-	3 (10)	1 (3)	30
	General Surgery	8 (32)	12 (48)	2 (8)	2 (8)	1 (4)	-	25
	Orthopedic Surgery	6 (32)	5 (26)	2 (11)	-	6 (32)	-	19
	PediatricOrthopedic	5 (38)	4 (31)	3 (23)	-	1 (8)	-	13
	Oral Surgery	6 (75)	2 (25)	-	-	-	-	8
	Vascular Surgery	5 (63)	1 (13)	2 (25)	-	-	-	8
	Urology Surgery	3 (43)	1 (14)	2 (29)	-	1 (14)	-	7
	Plastic Surgery	1 (17)	2 (33)	1 (17)	2 (33)	-	-	6
	OB/GYN	1 (50)	-	-	1 (50)	-	-	2
	Thoracic Surgery	-	1 (50)	1 (50)	-	-	-	2
	<b>Total</b>	74 (37)	59 (30)	32 (16)	17 (9)	16 (8)	2 (1)	200

P value = 0.174 (not significant data).



[Graph 1] Comparing male and female percentages according to each reason.

No answer was higher in females (46%) comparing to males (32%)

## DISCUSSION

These no shows have a negative impact on our hospital financially since we have lost 200 slots which lead to unnecessary loss of our staff working hours. In addition, these non-attendees may have prevented other deserving patients to be put on the surgical lists and many surgeons have a lot of patients on waiting lists. Last minute cancellation by a patient in some cases is difficult to resolve. It may be due to the patient feeling doubts and fears. A solution in some hospitals in the United States is to charge patients for not showing to the surgery appointment. Obviously, this cannot be applied for public hospitals in Saudi Arabia.

In comparison of better utilization of OR time, OB/GYN (1.4%) and Urology surgery (1.6%) had the least percentage of no shows, while Vascular (16.6%) and Thoracic surgery (10.5%) were the highest.

No show patients in our hospital resulted in 200 (34.4%) of total cancellation and when comparing to other hospitals we found that Schofield WN did a study about cancellation of intended surgery at a major hospital in Australia reported 941 (11.9%) cancellations out of 7913 theatre sessions. Patient non-arrival accounted for (10.5%) of total cancellation. <sup>[1]</sup>

With another study done in 500 bedded governmental hospital to evaluate

reasons for cancellation of elective surgical operation on the day of surgery during 12-month study period with a total of 7272 patients scheduled for elective surgical procedures. The total number of patients cancelled was 1286 (17.6 %); patients not turning up resulted in 244 (19%) of total cancellations. <sup>[8]</sup> Also in a prospective study on the day surgery cancellations in a government hospital in New Delhi revealed that number of patients who didn't turn up was 78 out of 482 cancellations (16.2%). <sup>[9]</sup>

These three studies suggested that our hospital have a significant high percentage of no show (34.4%) which is a lot more than in previous studies thus the hospital must take appropriate actions in this regard.

We found that nine percent of no shows claimed that their operation was cancelled by the hospital which might suggest a communication error.

We didn't find any incident of no show among adult age group between 16-60 years old. In the other hand, the incidence of no show cases was found to be in paediatrics and elderly groups only. Eighty one Percent was related to paediatrics which should be considered since children are dependent on their caregiver in all aspects and one is access to health services.

The OR coordination office usually contacts surgeon to decide which patients on waiting list going to have surgery in the next day, leaving only 12-24 hours to inform the patients. Giving patients more time before informing them about their surgery appointment will contribute to reducing rate of no shows.

Our finding revealed that high percentage of no show was due to patients not answering phone calls to confirm surgery appointment making 36% of total no show suggesting that the hospital might have incorrect patient's contact information.

There were some limitations to our study. First, there was some surgical departments in the hospital we were unable to collect data from. Second, the collected data took place in 6 months only and it

would have been more appropriate if it was not less than one year.

## CONCLUSION

We believe that many of no show cases were potentially avoidable and we must take actions to reduce it by addressing each problem beginning with the initial booking and patient notification. We strongly advice the hospital to ensure that patient's contact information are correct and not out of dated as well as developing improved methods to ensure attendance.

## REFERENCES

1. Schofield WN, Rubin GL, Piza M, Lai YY, Sindhusake D, Fearnside MR, et al. Cancellation of operations on the day of intended surgery at a major Australian referral hospital. *Med J Aust.* 2005;182(12):612-5.
2. Bathla S, Mohta A, Gupta A, Kamal G. Cancellation of elective cases in pediatric surgery: An audit. *J Indian AssocPediater Surg.* 2010;15:90-2.
3. Corfield L, Schizas A, Noorani A, Williams A. Non-attendance at the colorectal clinic: a prospective audit. *Ann R Coll Surg Engl.* 2008;90(5):377-380.
4. Fischer SP. Development and effectiveness of an anesthesia preoperative evaluation clinic in a teaching hospital. *Anesthesiology.* 1996;85:196-206.
5. Haana V, Sethuraman K, Stephens L, Rosen H, Meara JG. Case cancellations on the day of surgery: an investigation in an Australian paediatric hospital. *ANZ J Surg.* 2009 Sep;79(9):636-40.
6. Dexter F, Macario A. Applications of information systems to operating room scheduling. *Anesthesiology.* 1996 Dec;85(6):1232-4.
7. Zafar A, Mufti TS, Griffin S, Ahmed S, Ansari JS. Cancelled elective general surgical operation in Ayub teaching Hospital. *J Ayub Med Coll Abbottabad.* 2007;19:64-6.
8. Kumar R, Gandhi R. Reasons for cancellation of operation on the day of intended surgery in a multidisciplinary 500 bedded hospital. *J Anaesthesiol ClinPharmacol.* 2012;28:66-9.
9. Garg R, Bhalotra AR, Bhadoria P, Gupta N, Anand R. Reasons for cancellation of cases on the day of surgery - A prospective study. *Indian J Anaesth.* 2009;53:35-9.

How to cite this article: Abdulaziz AA, Abdullah TA, Ali HA. Analysis of no show patients at day surgery program in a multidisciplinary 1500 bedded hospital. *Int J Health Sci Res.* 2017; 7(2):19-23.

\*\*\*\*\*