

# An Audit of sedation need using IOSN Scoring

Dr Giju George( Consultant Anaesthetist), Mr. Roger Hollins

Atlantic Dental Practice , Earle Road, Liverpool, United Kingdom

Anxiety is the primary reason many patients fail to see a dentist leading to a vicious cycle of failure of attendance, coupled with poor dental health.

The (IOSN) <sup>1,2</sup> Indicator of sedation need was created to assess the need for sedation in patients undergoing dental procedures. This helped to identify anxious patients and also in the process of commissioning of services by commissioning groups. <sup>1,2</sup>

It has been quoted that 70% of the high need patients are women. <sup>3</sup>

The IOSN consists of an Anxiety questionnaire followed by matrix of scoring system

- 1.MDAS (anxiety questionnaire Rank score)
- 2.Medical and Behavioural rank score
- 3.Treatment complexity rank score.

The **Sedation Need** is scored based on the sum of the rank scores of the above (1+2+3)

SCORE	SOURCE descriptor	need for sedation
3-4	minimal need	NO
5-6	moderate need	NO
7-9	high need	YES
10-12	very high need	YES

We at Atlantic dental practice provided sedation to patients for dental extraction and restorative work using intravenous midazolam.

## Aim

- 1.To analyse the IOSN scores of patients for dental treatment.
- 2.To assess the peri-operative use of IV sedation in patients with the high MDAS score .
- 3.To correlate the dosage of midazolam use in patients to the MDAS score.

## Methods

This was a retrospective audit

Data was collected from patient notes and referral forms on 50 patients over a 3-4 month period.

Data collected included demographic data, ASA physical status and Dental treatment plan .

The additional information collected was dosage of intravenous MIDAZOLAM used for each of the 50 patients.

The use of midazolam was compared to MDAS scores using Mann And Whitney U test for non - parametric data. It was assumed that there is no relationship between midazolam requirement and MDAS scores.

## References

- 1.Journal 2011;9: 211(5):E10.. 1. The Indicator of Sedation Need (IOSN) - a novel assessment tool. British Dental Coulthard P, Bridgman CM, Gough L, Longman L, Pretty IA, Jenner T.
2. Dent Update. 2013 Jul-Aug;40(6):466-8, 470-1, Coulthard
3. Br Dent J. 2012 Mar 9; 212(5):E.183 Goodwin M1, Coulthard P, Pretty IA, Bridgman C, Gough L, Sharif MO.

TABLE 1

	Anxiety score	MDAS	ASA SC	DENTAL SC	MIDAZ	SEX	AGE	Sedation need
1	13	3	1	3	5	F	15	High
2	23	4	1	2	3	M	45	High
3	25	4	2	3	5	M	38	High
4	20	4	1	2	4	F	38	High
5	14	4	1	2	4	M	15	High
6	17	3	1	1	0	M	27	Moderate
7	25	4	2	2	5	F	35	High
8	5	1	2	2	4	F	50	Moderate
9	21	4	2	2	5	F	42	High
10	24	4	2	1	4	F	58	High
11	23	4	1	1	5	F	29	Moderate
12	5	1	1	2	0	M	35	Moderate
13	16	3	1	1	4	F	31	Moderate
14	21	4	2	2	7	M	52	High
15	22	4	2	2	3	F	29	High
16	10	2	2	2	3	F	45	Moderate
17	22	4	1	2	5	F	25	High
18	20	4	2	3	3	F	50	High
19	22	4	2	2	0	F	55	High
20	18	4	2	3	5	M	49	High
21	23	4	1	3	4	F	18	High
22	20	4	2	3	3	F	33	High
23	15	3	2	3	0	M	57	High
24	23	4	1	3	9	F	24	High
25	24	4	1	2	5	F	44	High
26	23	4	2	3	5	F	18	High
27	24	4	1	2	5	F	19	High
28	25	4	3	3	6	F	18	Very high
29	25	4	1	3	7	F	21	High
30	15	3	2	1	0	F	35	Moderate
31	24	4	1	3	8	M	31	High
32	25	4	1	3	4	F	43	High
33	21	4	2	3	3	F	56	High
34	21	4	2	3	4	F	51	High
35	25	4	1	3	14	M	37	High
36	25	4	1	3	5	M	29	High
37	24	4	1	3	13	M	27	High
38	24	4	1	3	4	F	59	High
39	15	3	2	2	0	M	63	High
40	25	4	1	3	10	F	29	High
41	23	4	2	2	4	F	34	High
42	23	4	1	3	5	F	34	High
43	11	2	1	3	4	M	56	High
44	24	4	1	2	4	M	37	High
45	19	4	1	3	0	M	37	High
46	24	4	1	3	7	M	34	High
47	25	4	1	2	7	F	29	High
48	24	4	1	3	4	F	20	High
49	24	4	2	3	5	F	51	High
50	25	4	1	3	3.5	F	47	High

## Results

Total 50 patients

AGE range 15-63 years Male – 17 Female - 33

42/50 were identified as high need of sedation

Males patients with high need 33.33%/ Female patients with high need 66.66%

Midazolam dosages range 0-14mg/ Mean dose of midazolam use 4.53 mg

92% of High need patients required IV sedation .

100% of Very high need patients required IV sedation in this audit

There is no statistical significance between use of intravenous midazolam and MDAS score P <0.0001 ( Mann –Whitney test)

## Conclusion

1. There is a high need for sedation in women as per previous publication. <sup>3</sup>
2. There is no correlation between MDAS score and dose of IV midazolam use.
3. IOSN is able to identify patients with high need of sedation
4. From this audit on 50 patients it is seen that patients with need of sedation correlated with use of IV sedation Peri-operatively. However this needs a larger study to evaluate statistical/clinical significance.