

Enhancing long-term Continuous Positive Airway Pressure (CPAP) compliance with a Specialist Nurse Clinic

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Obstructive Sleep Apnoea (OSA)



repetitive episodes of partial or complete upper airway obstruction during sleep

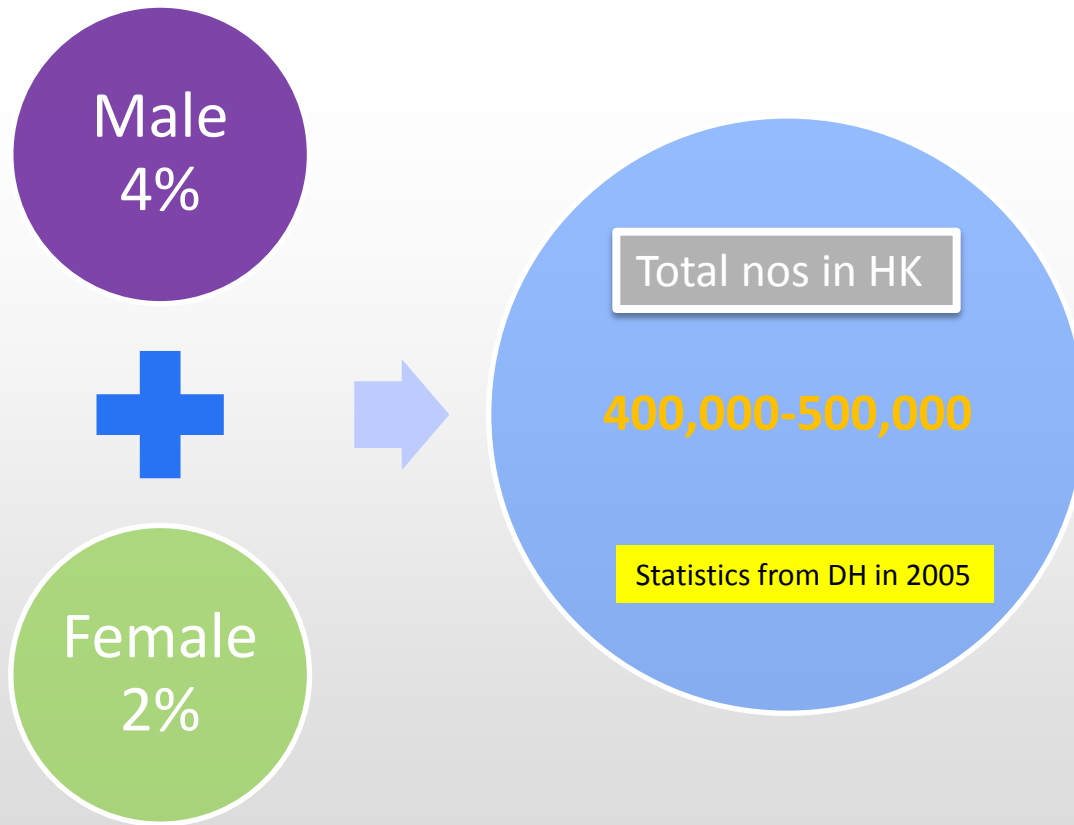


Symptoms of dozing, sleepiness, impaired cognition, mood disorders, nocturia



Cx : CVD, CNS, metabolic syndromes, peri-operative Cx & car accident

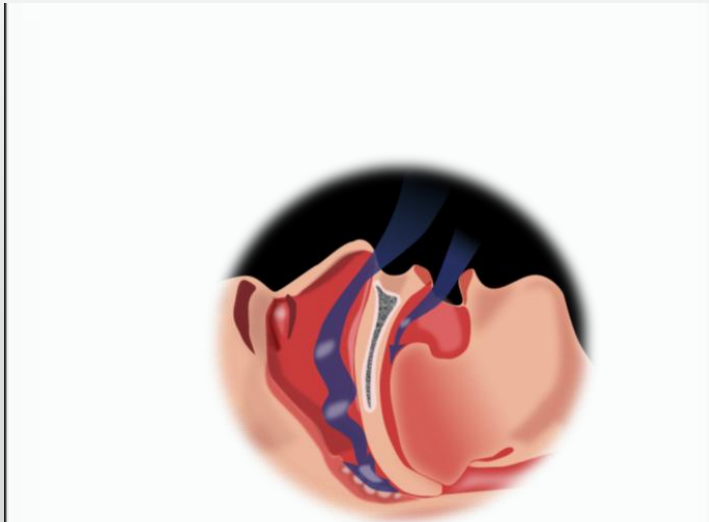
Prevalence of OSA in HK



Treatment of OSA

Continuous Positive Airway Pressure (CPAP)

–gold standard therapy for sleep apnoea



Background of the study on CPAP compliance

Continuous studies on improving CPAP acceptance & compliance since 2004

A single-nurse conducted educational session might make a difference (2004)

-Patient with or without group CPAP education (45.3% vs. 54.7)

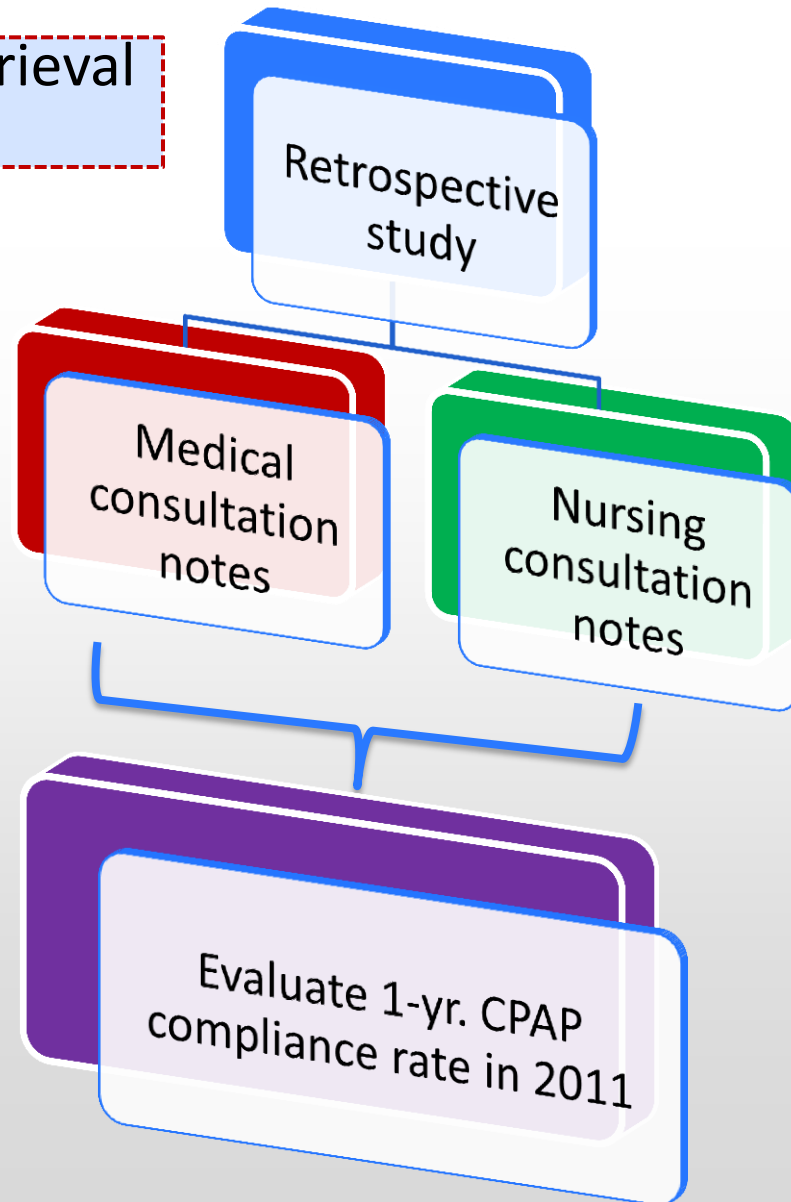
Individual nurse-led clinic consultation for patients with OSAS (2009)

-Nurse clinic consultation after CPAP education in 2009 (66.1%)

Enhancing long-term Continuous Positive Airway Pressure compliance with a Specialist Nurse Clinic (2012)

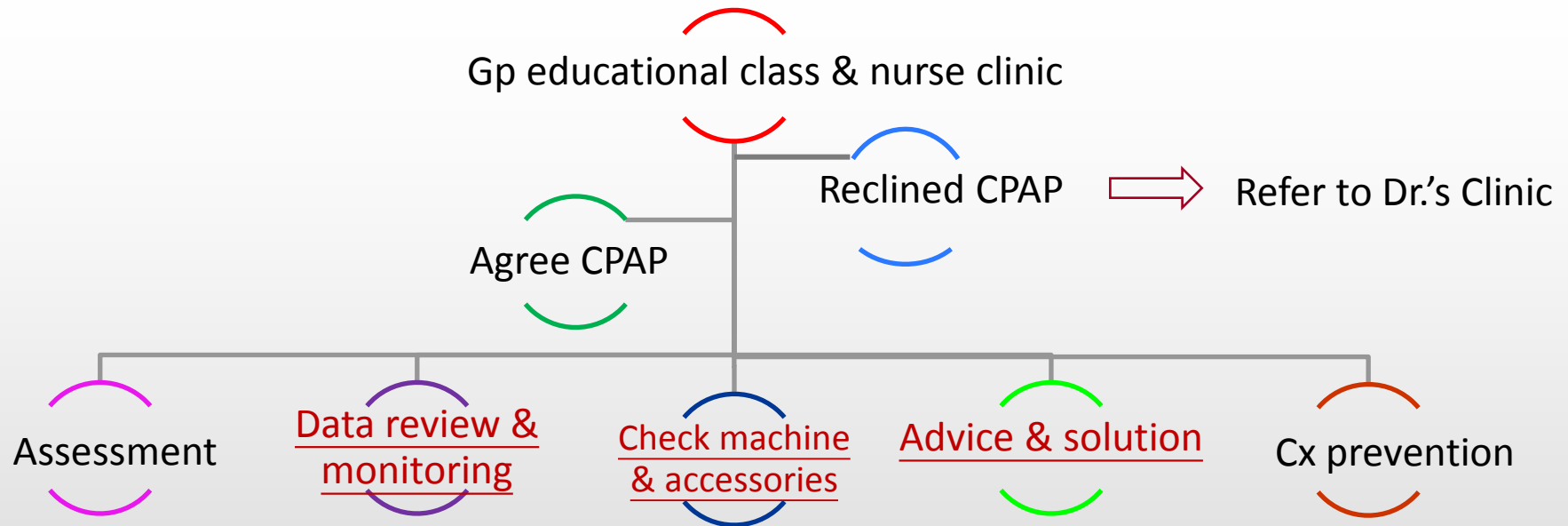
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Methodology--- Data retrieval
from 4/2010- 3/2011



Methodology

Pts with newly Dx OSA



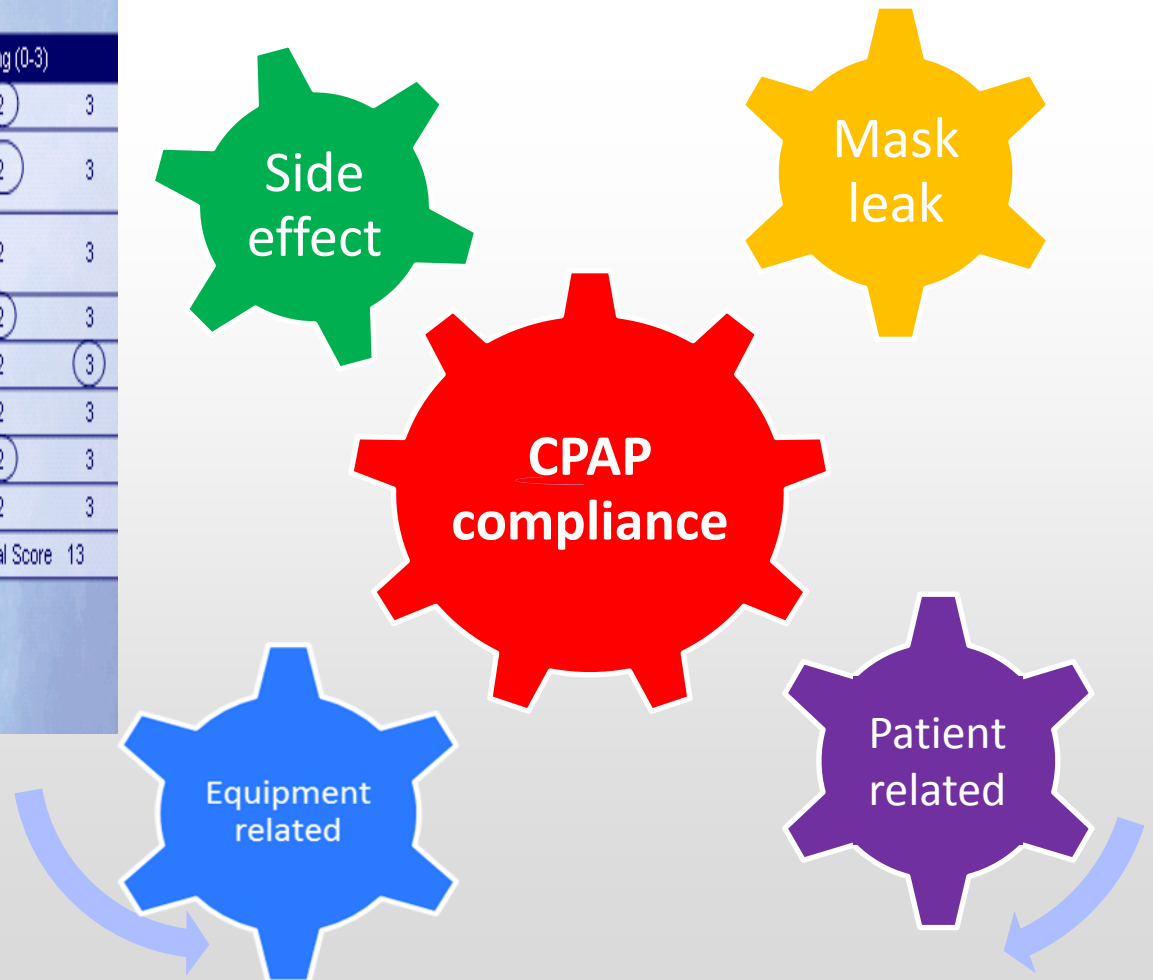
Epworth Sleepiness Scale (ESS)

What is your total score from the Epworth Sleepiness Scale?

Choose 1 if score is 0-6 3 if score is 11-13
 2 if score is 7-10 4 if score is > 14

Situation	Chance of dozing (0-3)			
Sitting and reading	0	1	2	3
Watching television	0	1	2	3
Sitting inactive in a public place - for example, a theater or meeting	0	1	2	3
As a passenger in a car for an hour without a break	0	1	2	3
Lying down to rest in the afternoon	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after lunch (when you've had no alcohol)	0	1	2	3
In a car, while stopped in traffic	0	1	2	3
Total Score				13

0 = would never doze 2 = moderate chance of dozing
 1 = slight chance of dozing 3 = high chance of dozing

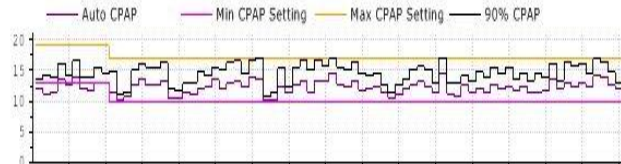


Sleep Therapy Long Term Trend

8/20/2012 - 11/7/2012



Pressure (cmH2O)



Average 90% Pressure
14.6

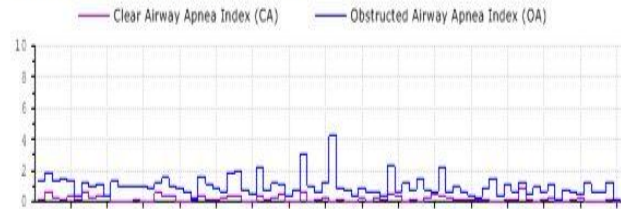
Average CPAP Pressure
12.3

Percent of Night in Periodic Breathing (PB)



Average % of Night in Periodic Breathing
0.0%

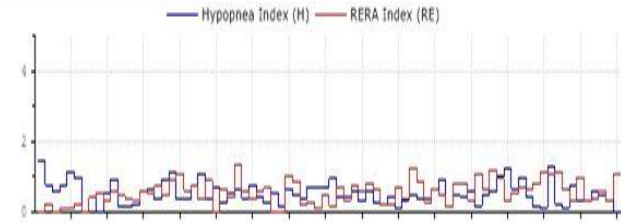
Clear Airway And Obstructed Airway Apnea Indices



Average CA Index
0.2

Average OA Index
1.0

Hypopnea And RERA Indices



Average Hypopnea Index
0.5

Average RERA Index
0.6

Average AHI
1.7

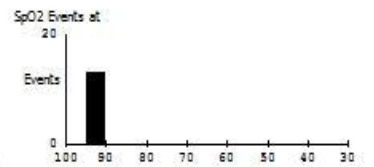
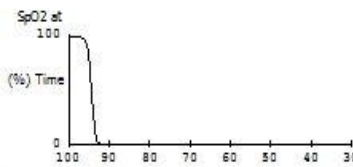
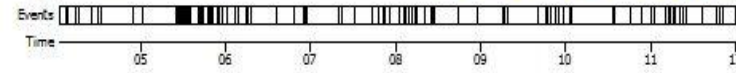
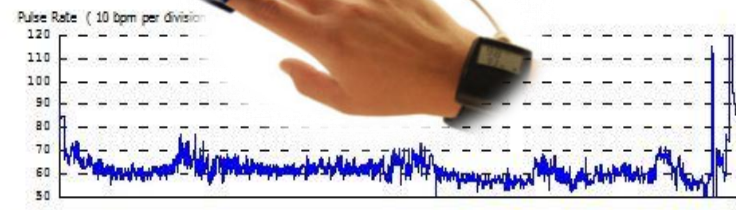
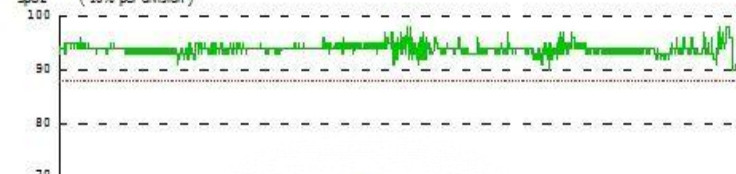
Recording Date(mm/dd/yy) : 03/05/11 time : 04:03:00 Duration : 07:57:10 Analysed : 07:57:10

Comments

Event Data	SpO2	Pulse	%SpO2 Level	Events	Below(%)	Time(%)
Total Events	13	104	99 - 95	0	100	100.0
Time In Events(min)	9.8	71.8	94 - 90	13	95	85.2
Avg. Event Dur.(sec)	45.3	41.4	89 - 85	0	90	0.0
Index (1/hr)	1.6	13.1	84 - 80	0	85	0.0
% Artifact	0.2	0.2	79 - 75	0	80	0.0
Adjusted Index (1/hr)	1.6	13.1	74 - 70	0	75	0.0
%SpO2 Data			69 - 65	0	70	0.0
Basal SpO2(%)	93.9		64 - 60	0	65	0.0
Time(min) < 88%	0.0		59 - 55	0	60	0.0
Events < 88%	0		54 - 50	0	55	0.0
Minimum SpO2(%)	90		49 - 45	0	50	0.0
Avg. Low SpO2(%)	92.0		44 - 40	0	45	0.0
Avg. Low SpO2 < 88%	----		39 - 35	0	40	0.0
Pulse Data			34 - 30	0	35	0.0
Avg Pulse Rate(bpm)	62.0					
Low Pulse Rate(bpm)	37					

Analysis Parameters
Desaturation Event: drop in SpO2 by at least 4% for a minimum duration of 10 seconds.
Pulse Event: Change in rate by at least 6 bpm for a minimum duration of 8 seconds.

Graphic Summary





Appropriate
Mask
application



Proper
machine
operation

headgear



Appropriate
assembling

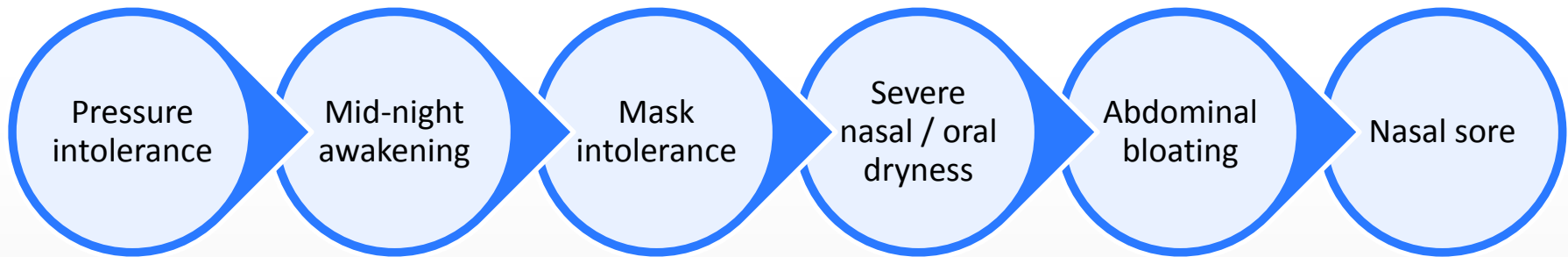
Chin strap



tubing

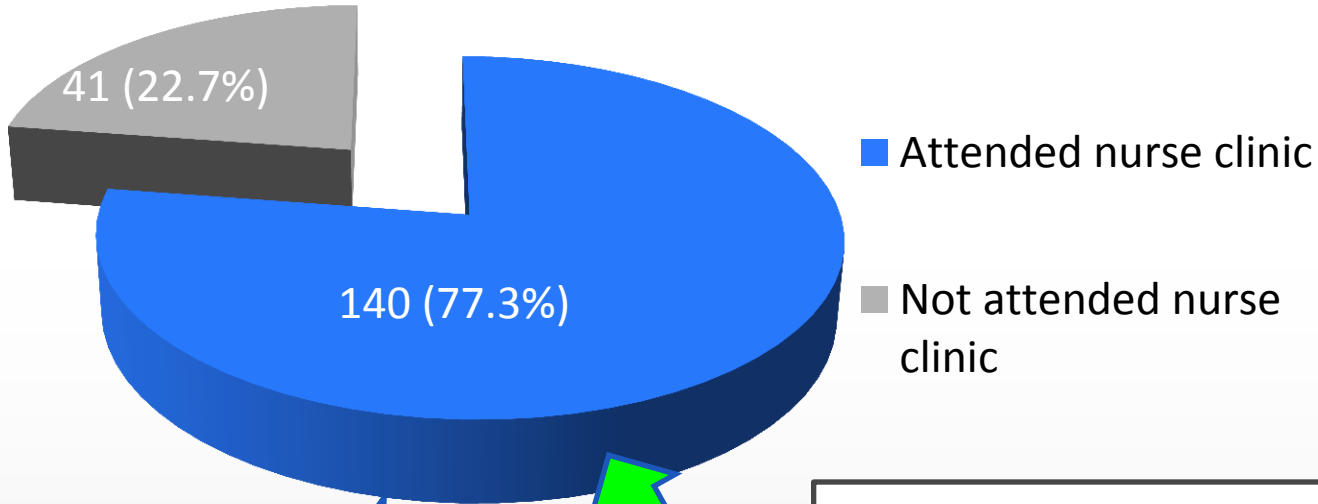


Most commonly problems, Cx & advice

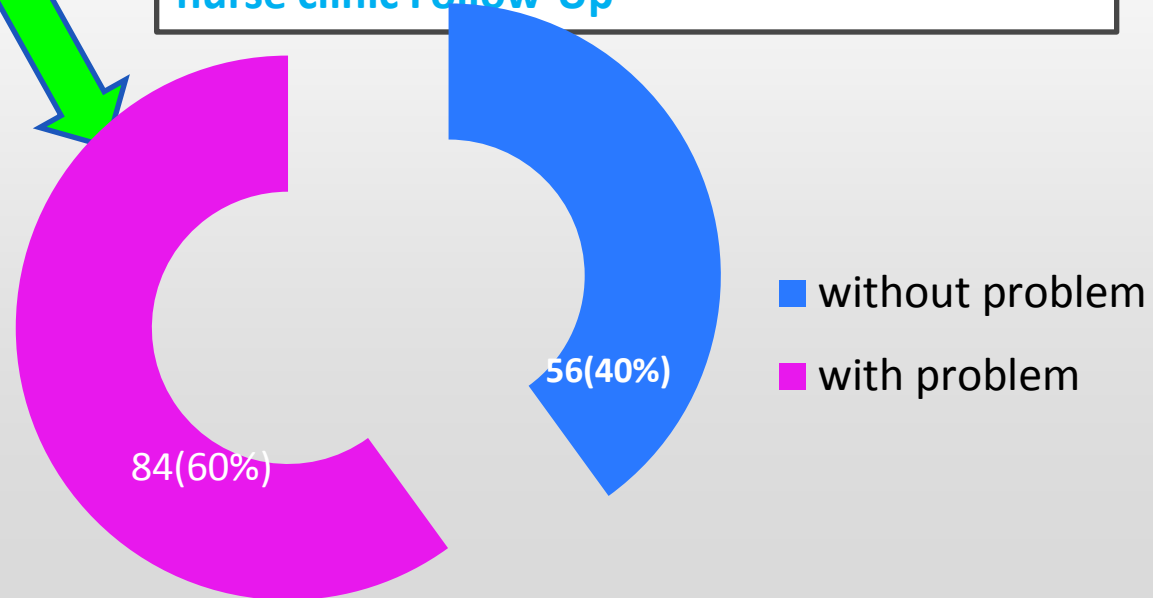


Result

Agree on CPAP therapy after 1st visit to nurse clinic

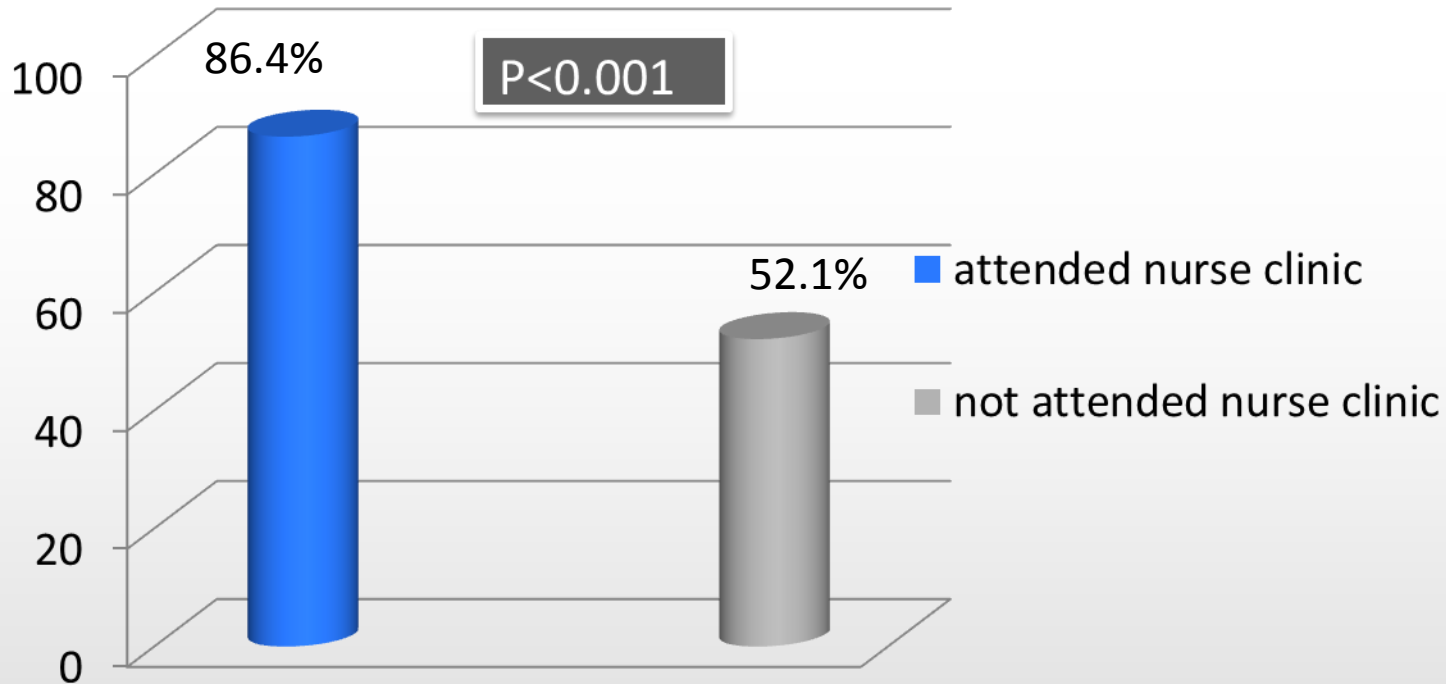


Reported problems related to CPAP during nurse clinic Follow-Up



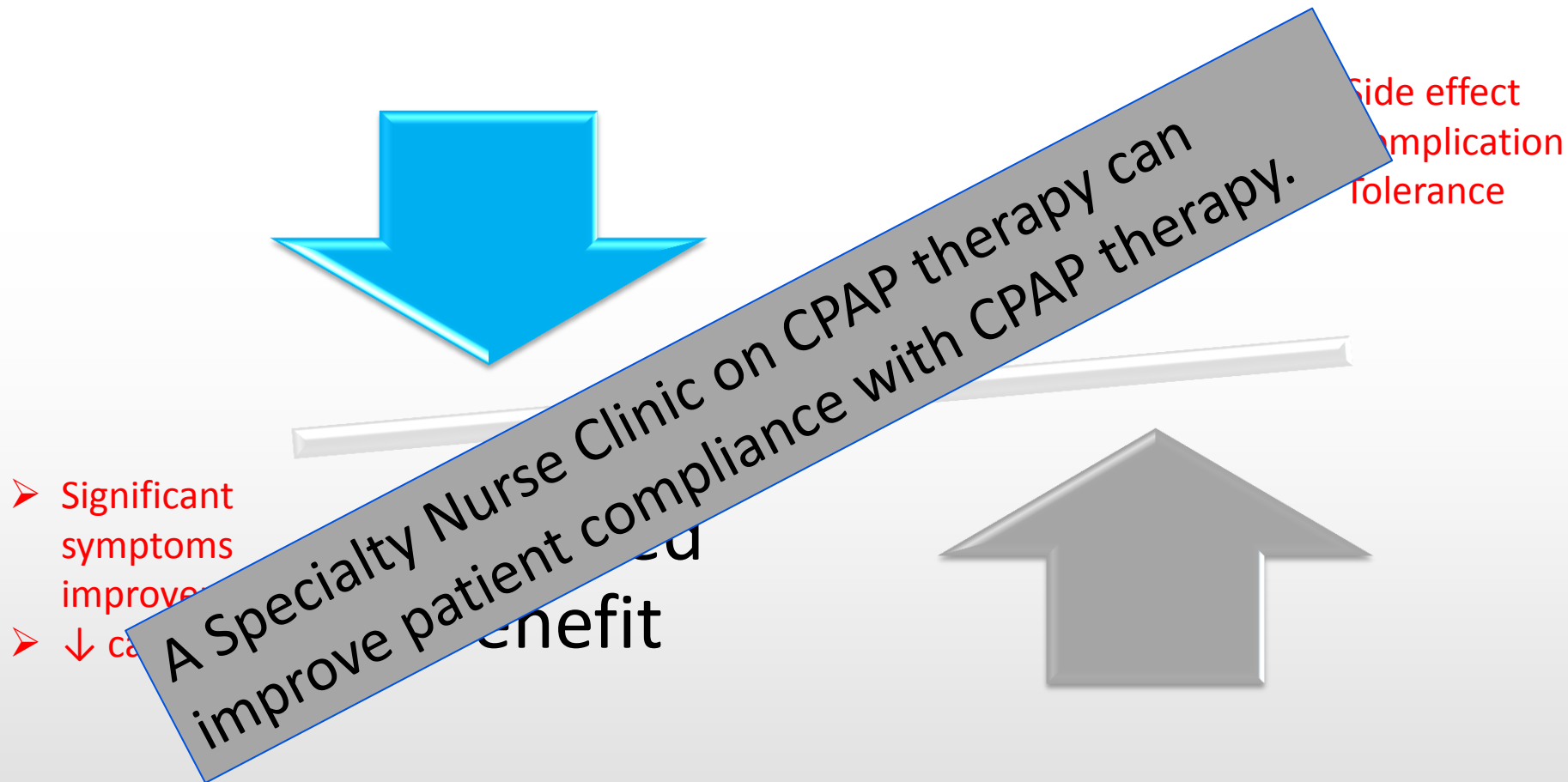
72(86%) eventually solved

CPAP compliance rates



Acceptable compliance was defined by Kribbs et al. as CPAP use at least 4h/day for at least 70% of the nights per week.

Conclusion



Patients' decisions to accept CPAP treatment depend on the balance between perceived benefit and cost

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- Ms Chow Pui Shan QEH RN (MED)



Thank You