

A Review of a Critical Care Advanced Nurse Practitioner Led Nasojejunal (NJ) Tube Insertion Service: “100 to 1” euros



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Introduction:

- NJ tubes are used to facilitate post pyloric feeding (PPF).
- PPF is recommended in critically ill patients when feeding intolerance is not resolved by prokinetic agents and in those at high risk of aspiration¹ and in severe pancreatitis.
- The use of PPF has been associated with reduced incidence of ventilator associated pneumonia¹.
- Insertion of NJ tubes requires expertise and delays can lead to nutritional deficits.
- An ANP led NJ tube bedside insertion service was set up in 2021.



Fig 1: Avanos Cortrak 2* EAS system³

Methods:

- A retrospective review of all NJ tube insertions attempted by CCANPs between September 2021 and July 2023.
- The Avanos Cortrak*2 EAS system was used in all cases. (Fig 1)
- This is an electromagnetic sensing device that assists in identifying correct NJ positioning³ (Fig 2).
- As per local protocol a chest x-ray was required to ensure correct positioning before use.

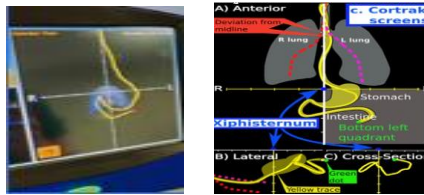


Fig 2: Cortrak NJ tube visualisation on insertion

Results:

- 44 NJ tube insertions were attempted by the CCANP team during the study period.(Fig 4)
- Patient demographics, indications for NJ tube, success rates of procedure and complications are seen in Fig 3.
- Evidenced based prokinetics² were administered to assist insertion in 95% of patients.
- Insertion was successful in 81% of patients.
- In 75% of patients the indication for insertion was high gastric residual volumes in 75% of patients.

Demographics	<ul style="list-style-type: none"> Male-54% Female-36% Average age =49yrs
Indications	<ul style="list-style-type: none"> High residual volumes-75% Acute Pancreatitis-25%
Insertions	<ul style="list-style-type: none"> Successful-81% Unsuccessful-18%
Complications	<ul style="list-style-type: none"> Nil-0%
Received Prokinetics	<ul style="list-style-type: none"> 95%

Fig 3: Results

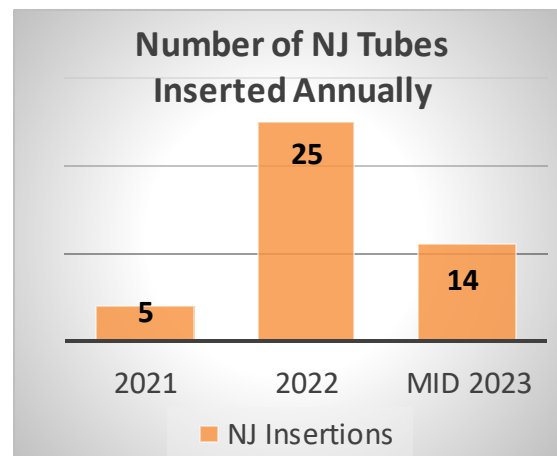


Fig 4 :NJ insertion activity

1 bag of TPN/day	~100 euros
1 bottle of NJ feed	~1 cent

Fig 5: Approximate cost

Conclusions:

- Bedside NJ Tube placement in the critically ill patients by an ANP service is safe and has a high success rate
- Potential benefits of this service include:
 - Earlier access to PPF in critically ill patients as ANPs can insert at bedside and are available 7 days per week
 - Improved nutritional adequacy in those not tolerating nasogastric feeding
 - Reduced requirements for parenteral nutrition
 - Significant cost savings given the significant cost difference between TPN and NJ feed (Fig 5) “100 euros reduce to 1 euro/day”
 - Consistency in the approach to NJ tube insertion

References

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