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Lotus Eldercare Recommendation on duration of Nasogastric Tube use, for CORPAK Corflo and COVIDIEN Kangaroo Feeding tubes



Nasogastric tube feeding is becoming increasingly common, as chronic sick patient load increases in our aging population. Nasogastric tube feeding traditionally is not recommended for use in long term care, it is usually only used for 4 to 6 weeks. However, due to certain patient's, clinical and operational factors, it is routinely use for long term care in the acute hospitals in Singapore.

Singapore's market has been using Abbott's Flexiflo nasogastric tubes, both size 12 and 14 in the past 5 to 10 years. However, [Abbott has since decided to discontinue some of their enteral products in 2012](#). The stocks of the tubes in Abbott's warehouse lasted another 2 years. In early 2014, the market was introduced to 2 other brands of nasogastric tubes for long term usage.

Insertions of nasogastric tube carry potential risks. In the hospital's standard protocols, post intubation placements will be confirmed radiologically. Hospitals also have the additional advantage to use endoscopic, fluoroscopic, electromagnetic and even surgical aided insertions. In the community, the insertions of nasogastric tubes are almost always done blind. Non-visual placement confirmation techniques that are used in the community are air inflation and auscultation, looking out for symptoms with a trial feeding of small amounts of water with pulse oximetry monitoring and aspiration of gastric contents to confirm acidity with pH indicators.



Our patients in nursing homes and home care services using long term nasogastric tube feeding are often those with severe neurological injuries from traumatic brain injuries, stroke diseases and various forms of encephalopathies (hypoglycaemic, hypoxic etc); and the elderly population with dementia or swallowing impairment from functional and physical decline from various medical conditions and end organ failures. This group of patients will have increased risks during the insertion of nasogastric tube, with even higher risks when inserting a nasogastric tube into a demented, agitated elderly. In this group of demented patients, nasogastric tubes are usually poorly tolerated and would be removed by the patient repeatedly, causing much stress and anxiety to the care givers.

The main and most obvious risk of nasogastric insertion is mal-positioning. Mal-positioning of tubes can range from 0.3% intrapleural (Valentine and Turner) up to 2.4% (Sorokin and Gottlieb n= 2000) of the adult cases, with those inserted into the trachea, bronchus or even pleural spaces as the key causes of morbidity and mortality. Pulmonary formulae infusion with choking, pulmonary infections /abscesses and pneumothorax can occur in mal-positioning. Oral malposition is very common and easily detected in uncooperative and agitated patients undergoing tube insertions.

Since each insertion posed a risk of mal-positioning and various associated complications, the less frequent the tube is changed the less chance there is that the tube will be mal-positioned. Corflo and Kangaroo are nasogastric tubes, and since nasogastric feeding are not thought to be a long term solution in traditional way of usage, their official standard recommendations is to be used for only 4 weeks. However, in Singapore, for many long term chronic sick patients, nasogastric feeding can continue for even 10 years and

beyond in some cases. Flexiflo tubes are being used previously for 2 to 3 months usually without any issues for majority of the patients. Now, with around 1 year of experience with Corflo and Kangaroo tubes, they have been shown in my practice to be able to last around 2 to 3 months or more (our threshold is still maximum 3 monthly changes so we do not have experience on longer periods). The removed tubes (after 3 months) are observed and noted to still be in functional conditions.

If these tubes were to be changed monthly, and blindly inserted in community, the cost, possibility of mal-positioning of the tubes and direct trauma or discomfort to the patient will be raised by 300%. This is in my opinion, is very unfair to the patient (in having the discomfort of getting the tube replaced monthly – 12 times a year vs 4 times a year), the family (raising the cost suddenly by 300% in terms of the services and buying of the tubes) and the operator (with 300% increase in malposition risk and other associated complications which may or may not culminate to law suits against the institution)

Hence, Lotus Eldercare will **recommend both Corpak's Corflo and Convidien's Kangaroo feeding tubes to be changed every 2 to 3 month period** with proper care and maintenance.

We also have recommendations from Corflo attached [here](#).

Here are some photos of a used Kangaroo tube after 3 months. Apart from the discolouration likely from gastric acid and gastric contents, the tube is still patent and functional. No evidence of any breaking down of the material.





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