# Healthcare Cost-Savings Initiative from an Evidence-Based Review of DHA Supplements in KKH Formulary

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## INTRODUCTION

Docosahexaenoic acid (DHA) supplementation during pregnancy and lactation is beneficial for infants' growth and functional development. Historically, KKH carried the same brands ( Brand A and Brand B) of DHA supplements in the formulary due to prescriber preference.

## PROBLEM STATEMENT

No formal evaluation on the use of DHA supplements in the hospital, which may result in monopoly of certain brands despite availability of similar or better alternatives in the market

**MONOPOLY = ↑ COST**

## INTERVENTION

**Review tender process**

Request for Proposal (RFP) for DHA supplements was called and opened to all interested companies that fulfilled the criteria

## METHODOLOGY

- Literature search performed to identify DHA requirements in pregnancy and breastfeeding
- RFP called based on following criteria; DHA content, heavy metal limits and halal/vegetarian status
- DHA brands evaluated by a committee comprising of pharmacists, with input from hospital's obstetricians
  - **BRAND C** was introduced and concurrently Brand A and B were removed from formulary (available in retail) in June 2013
- Costs, payment modes and hospital movement (formulary and retail) of all three brands were analyzed before and after June 2013

**Brand C**

- ☑ Fulfilled criteria
- ☑ Non-inferior to other brands in terms of safety
- ☑ **28 – 44%** cheaper than Brand A or B
- ☑ Approved by hospital Pharmacy and Therapeutics (P & T) Committee

## RESULTS

Expert panels recommend a daily dietary DHA intake of 200 to 300mg for pregnant and lactating mothers[1,2]. There is no evidence to support a particular DHA to eicosapentaenoic acid (EPA) ratio, as advertised by certain brands.

AFTER introduction of **BRAND C** (formulary):

**Cost-Savings** ~ S$ 41,000/annum

However, Brand C was prescribed less frequently compared to the previous year's movement of Brand A and Brand B (approximately 2,400 versus 21,000 bottles). Retail sales of Brand A and Brand B increased, resulting in retail costs of approximately S$ 740,000.

If these sales were translated to the more cost-effective Brand C, healthcare savings would be :

**Extrapolated Cost-Savings** ~S$ 300,000/annum

Assuming up to 15% of the DHA supplements were borne by **3rd party payers** as per previous years, they can expect cost savings of :

**Extrapolated Cost-Savings** ~ S$ 46,000/annum

### Movement of Brand C in Formulary

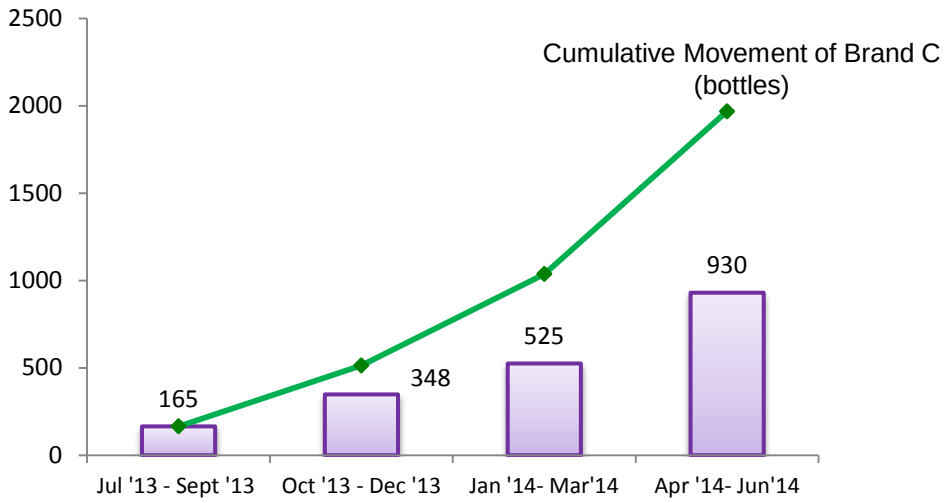


*Chart depicting the movement of Brand C in the formulary (based on data from Outpatient Pharmacy and inpatient discharges)*

## DISCUSSION

Hospital formularies may carry supplements too, although these are not marketed as drugs. It may be challenging to decide which brands to include in the formulary due to lack of scientific evidence and unsupported claims. Certain brands are usually considered better than another due to effective marketing strategies by the companies. However, these brands are often associated with higher costs. This review highlighted that substantial cost-savings can be achieved for patients and third-party payers through a methodological evaluation that is evidence-based.

## CONCLUSION

This review demonstrates the potential cost-savings that can be achieved from an organized review process to ensure that the most cost-effective product is included into the formulary.

**Reference(s)**:
1. Recommended intakes of DHA for infants, pregnant and lactating mothers. DHA. EPA Omega-3 Institute.
2. Adequate intakes/recommendation tables. International Society for the Study of Fatty Acids and Lipids 2013.