

The acceptability of cast iron and blue steel pots in Vietnam

**Thu Le Thi¹, MA Hoang¹, PR Berti²,
PATH Canada, Hanoi, Vietnam¹ and Ottawa, Canada²**

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INTRODUCTION

Iron deficiency is a widespread public health problem with serious consequences.

- Iron cooking pots leach iron into the food as it is being prepared, increasing the amount of iron in the diet.**
- The efficacy of iron pots in reducing iron deficiency anaemia was shown in studies in Ethiopia, Malawi, and Brazil.**
- While efficacious, iron pots have some undesirable characteristics, including prone to rusting and discolouring food, heavy and slow to heat. These can reduce the use of iron cooking pots rendering them ineffective.**

Summary: Iron pots will likely be effective if they are used daily. *The conditions to ensure high compliance are not well studied.*

OBJECTIVE

As part of a study on measuring the effectiveness of iron cooking pots in reducing iron deficiency anaemia, to evaluate the acceptability of cast iron and blue steel cooking pots in Vietnam, and to determine preferred pot design.

Cast Iron Pot



Blue Steel Pot



METHODS

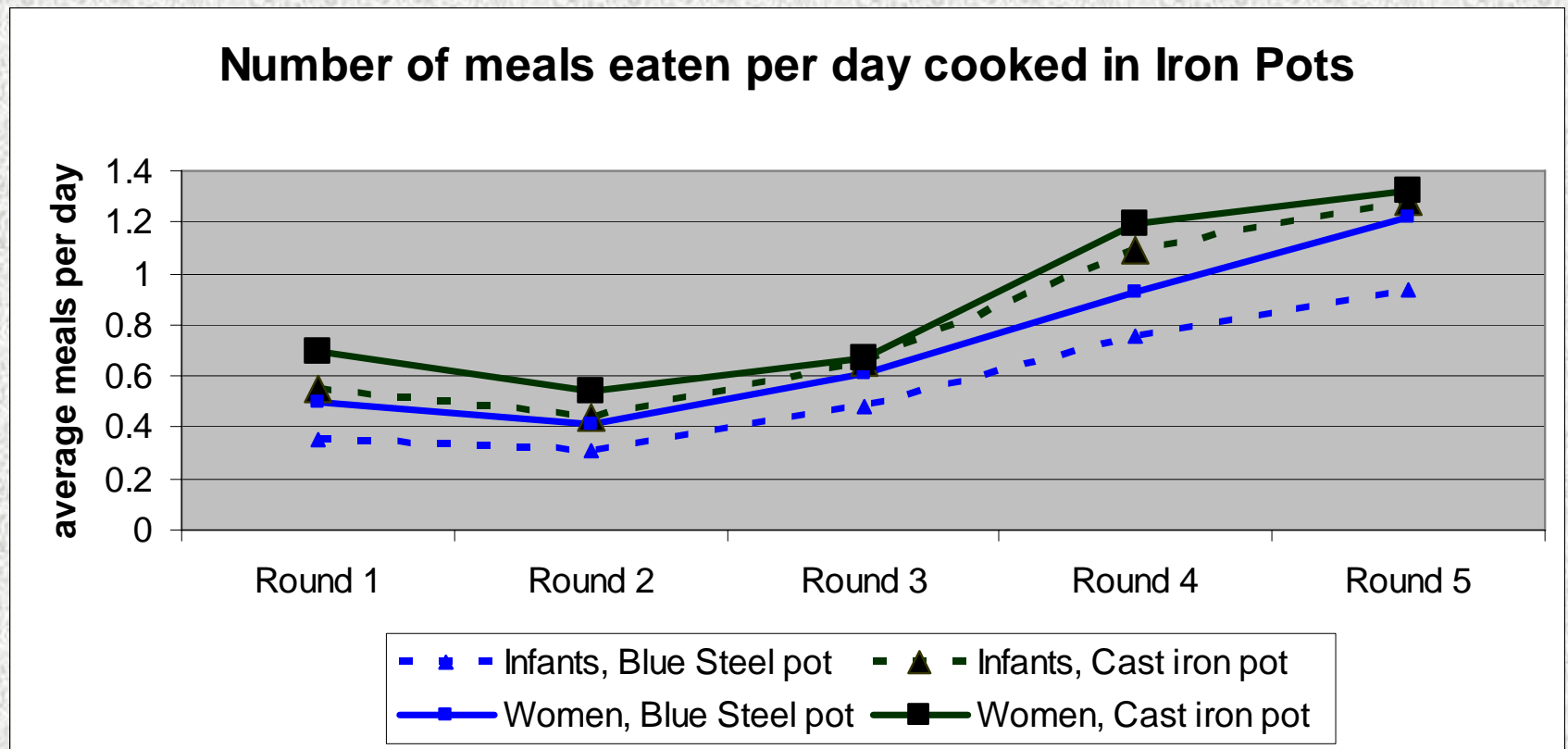
As part of a study on the effectiveness of iron cooking pots in reducing anemia, we conducted two types of research:

- (1) COMPLIANCE:** measured pot use compliance in a randomized trial on the efficacy of cast iron pots and blue steel pots (n=128 households)
- Cast iron pot and steel pot were distributed to households with guidelines to use the pot for cooking as often as possible and at least once per day.
 - Interviews on household pot use and consumption of foods by infants, adolescent girls and women of reproductive age, were done every two weeks for ten weeks.
 - Promotional messages were delivered in three communes throughout the ten weeks.
- (2) QUALITATIVE:** conducted five focus group discussions and 17 interviews with key informants on cooking pot preference and infant feeding patterns

RESULTS-1

Compliance

Compliance increased throughout the study period, increasing on average from once per two or three days at the beginning to an average of once per day by the end



A woman with dark hair tied back is looking down at a young child. The child is wearing a light blue t-shirt with a colorful graphic. The background is a plain, light-colored wall. The text is overlaid on the image in a semi-transparent white box.

RESULTS-2

Qualitative

- **Infants ate only small amounts of food prepared in the family pot. Most of the infants' food was prepared in a special "infant pot".**
- **It was also reported that the cast iron pot was thick, heavy and gave a metallic taste. The blue steel pot was too thin and also prone to rusting, but was preferred to cast iron.**

DISCUSSION-1

From research reported elsewhere:

- Blue steel pots leached more iron than cast iron pots into typical Vietnamese infant foods**
- Iron status is generally adequate in teens and WRA and there is no need for increasing their iron intake;**
- Iron status is often poor in infants, and increasing their iron intake should be a priority.**

Given this, we conducted further research on infant feeding and preferred infant pot design and learned that:

- The infant pot is used in all households to cook the infants complementary foods such as rice powder and rice porridge.**
- Food for the infant is cooked in this pot from the average age of 4.6 through 15.4 months**

DISCUSSION-2

The preferred infant blue steel pot:

- aluminium outside, aluminium lid and handles (to prevent rusting)
- blue steel inside lining to allow leaching iron.

•Dimensions:

- Mouth diameter: 16 cm
- Bottom diameter: 15 cm
- Height: 8.2 cm



Mock up Infant Pot

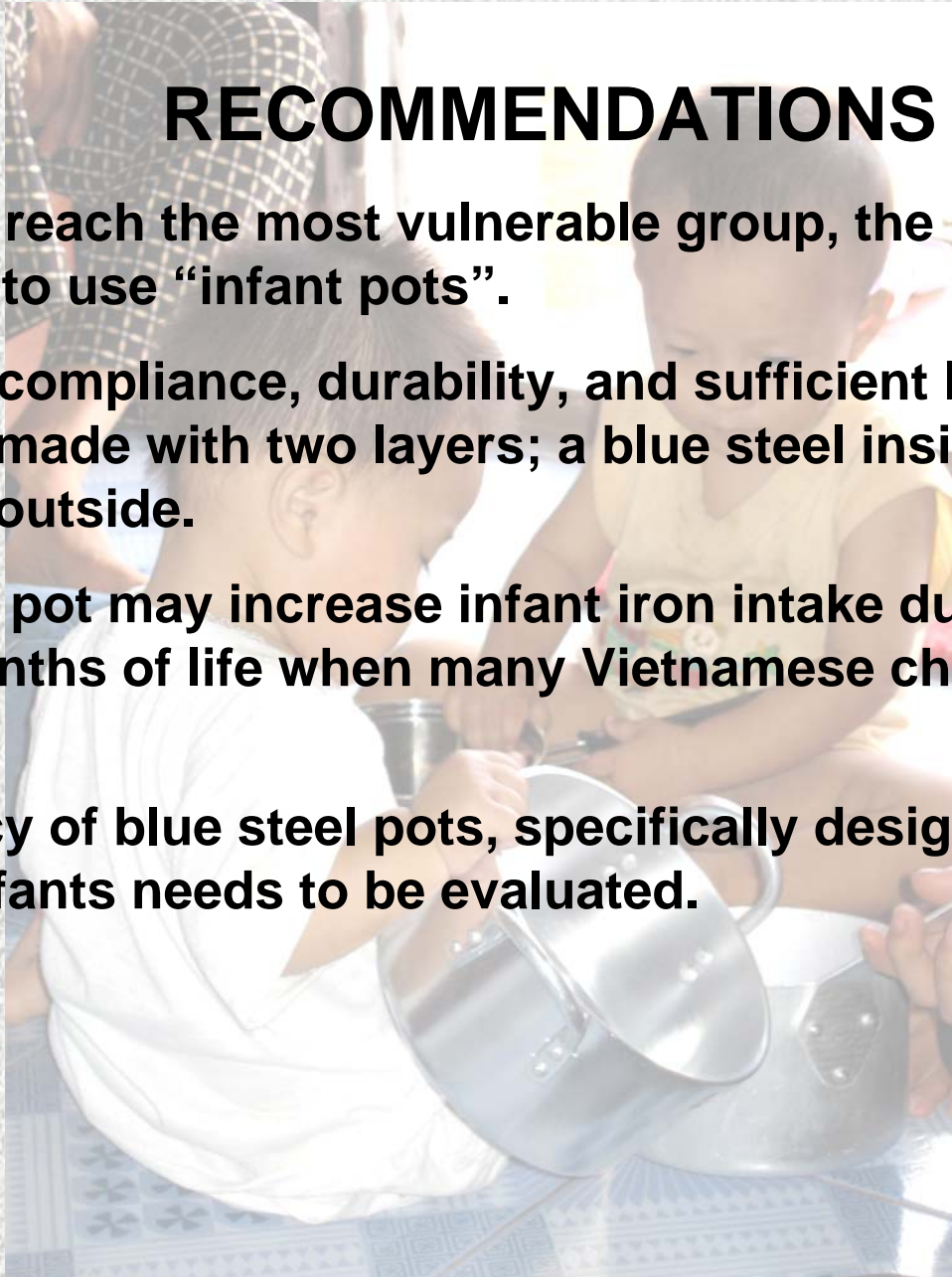
RECOMMENDATIONS

In order to reach the most vulnerable group, the infants, it will be necessary to use “infant pots”.

To ensure compliance, durability, and sufficient leaching, the pot should be made with two layers; a blue steel inside and aluminum outside.

This infant pot may increase infant iron intake during the critical first 16 months of life when many Vietnamese children become anemic.

The efficacy of blue steel pots, specifically designed for cooking food for infants needs to be evaluated.



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