Healthfulness of Foods & Food Sourcing Characteristics at Select Minnesota Hunger Relief Programs during Covid-19 Pandemic

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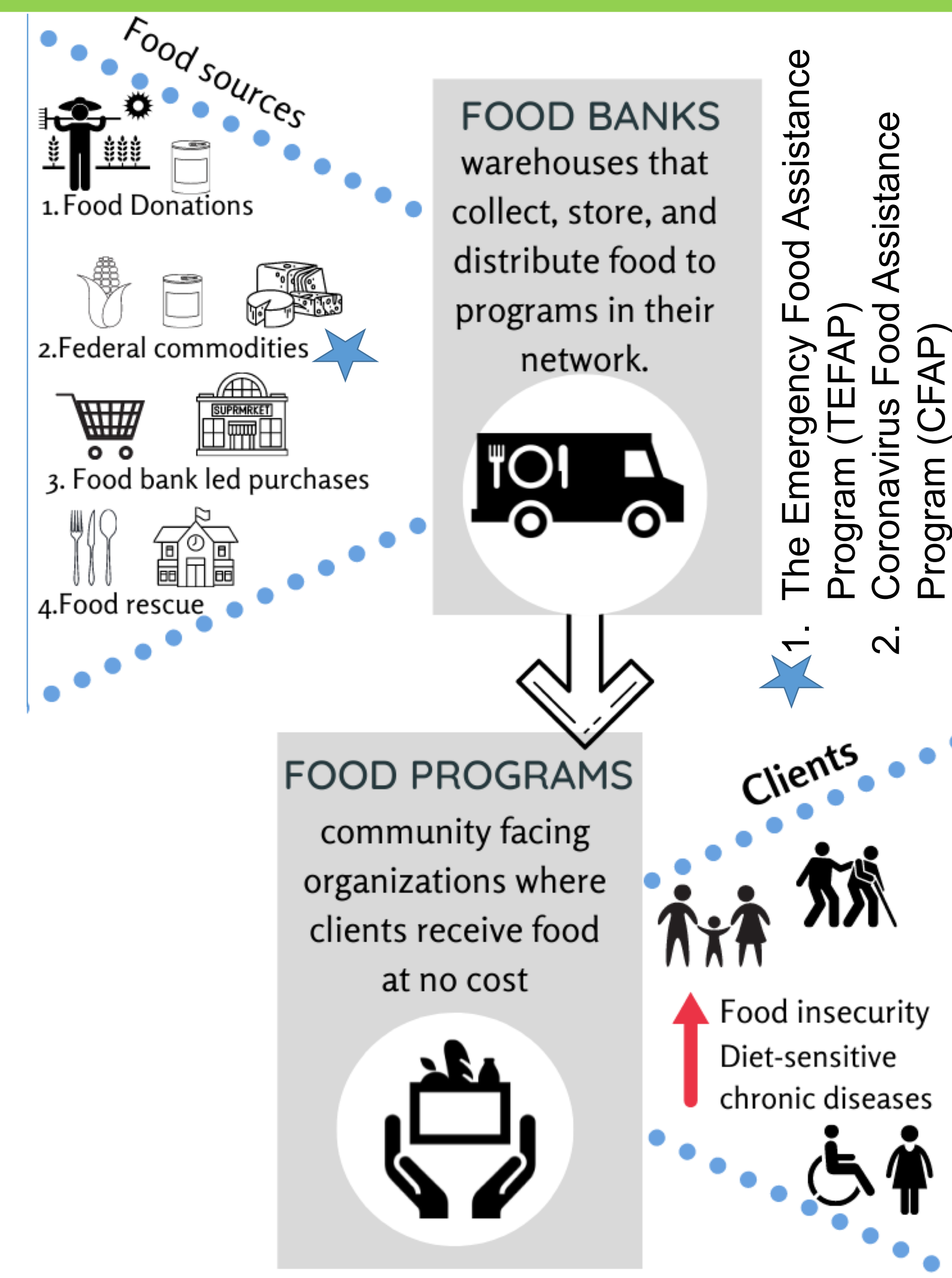
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BACKGROUND

- In 2020, the US hunger relief system (HRS) served 60 million disadvantaged Americans,[2] a 50% increase from 2019.[1]
- COVID-19 related response to meet increased food demand and regulatory measures led to monumental shifts in the ways HRS acquired foods through 4 food streams: Federal, Purchased, Donated & Rescued.[2,3]
- Previous evidence documents important relationship between food availability and food item selection – suggesting healthier pantry inventory can improve quality of foods that clients take home for consumption.[4]
- However, evidence on nutritional quality of food streams available through food banks, and overall pantry inventory quality is scant.

Objectives

1. Examine the nutritional quality of 4 food streams available to hunger relief programs through the food banks

2. Evaluate the association of program-level and food sourcing variables with the overall nutritional quality of program inventory

Food sources
1. Food Donations
2. Federal commodities
3. Food bank led purchases
4. Food rescue

FOOD BANKS warehouses that collect, store, and distribute food to programs in their network.

1. The Emergency Food Assistance Program (TEFAP)
2. Coronavirus Food Assistance Program (CFAP)

FOOD PROGRAMS community facing organizations where clients receive food at no cost

Clients
Food insecurity
Diet-sensitive chronic diseases

METHODS

Study population & datasets

- 2 Food Banks (FB) provided food sourcing data for 4 types of programs (n=333) in Minnesota. Pantry, mobile, mass distribution and produce programs. Study period was July to December 2020.
- Datasets included sales data: item description, gross weight (lbs), order date, FB assigned food category, storage type; and other program related details.
- Food Assortment Scoring Tool (FAST) was used to compute nutritional quality. Score range 0-100, higher score reflect better quality. FAST correlates with Healthy Eating index; better suited to measure pantry foods.[5]

Measures

- FAST for 4 food streams, using 6 month aggregated inventory per program
- FAST for overall inventory per program
- Program level characteristics, such as location, program size, program type, and food sourcing variables (proportion federal (TEFAP, CFAP), donated, purchased, rescued foods)

Analysis

- Non-parametric test (Kruskal-Wallis) used to compare FAST across food streams
- Multivariable linear regression used to test the association between program characteristics and the overall program FAST
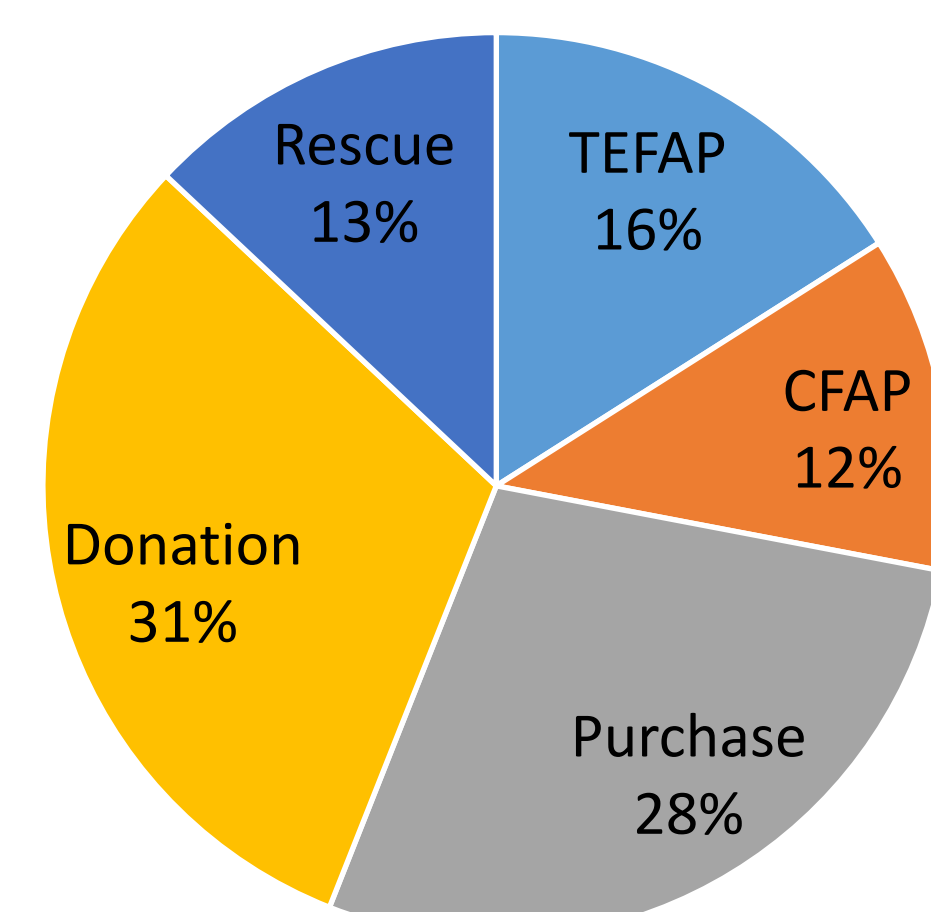
RESULTS

Program characteristics (n=333)

Characteristics	% / Mean
Mean FAST score	63.0
Urban	80%
TEFAP offering program	48%
Received some food sourcing intervention	18%
Dry food (pounds)	41%
Mean food order days	20
Program type	
Pantry	61%
Mass distributions	17%
Mobile pantry	5%
Produce program	17%

Food stream percent (lbs)

Rescue 13%
TEFAP 16%
CFAP 12%
Donation 31%
Purchase 28%

Nutritional Quality of Food Streams

	FAST Score
TEFAP (Federal)	67.81
CFAP (Federal)	65
Donated	63.4
Purchased	61.4
Rescued	60.5

Food stream FAST scores varied overall (p<0.001); and across program types (p<0.05) except for federal streams across programs.
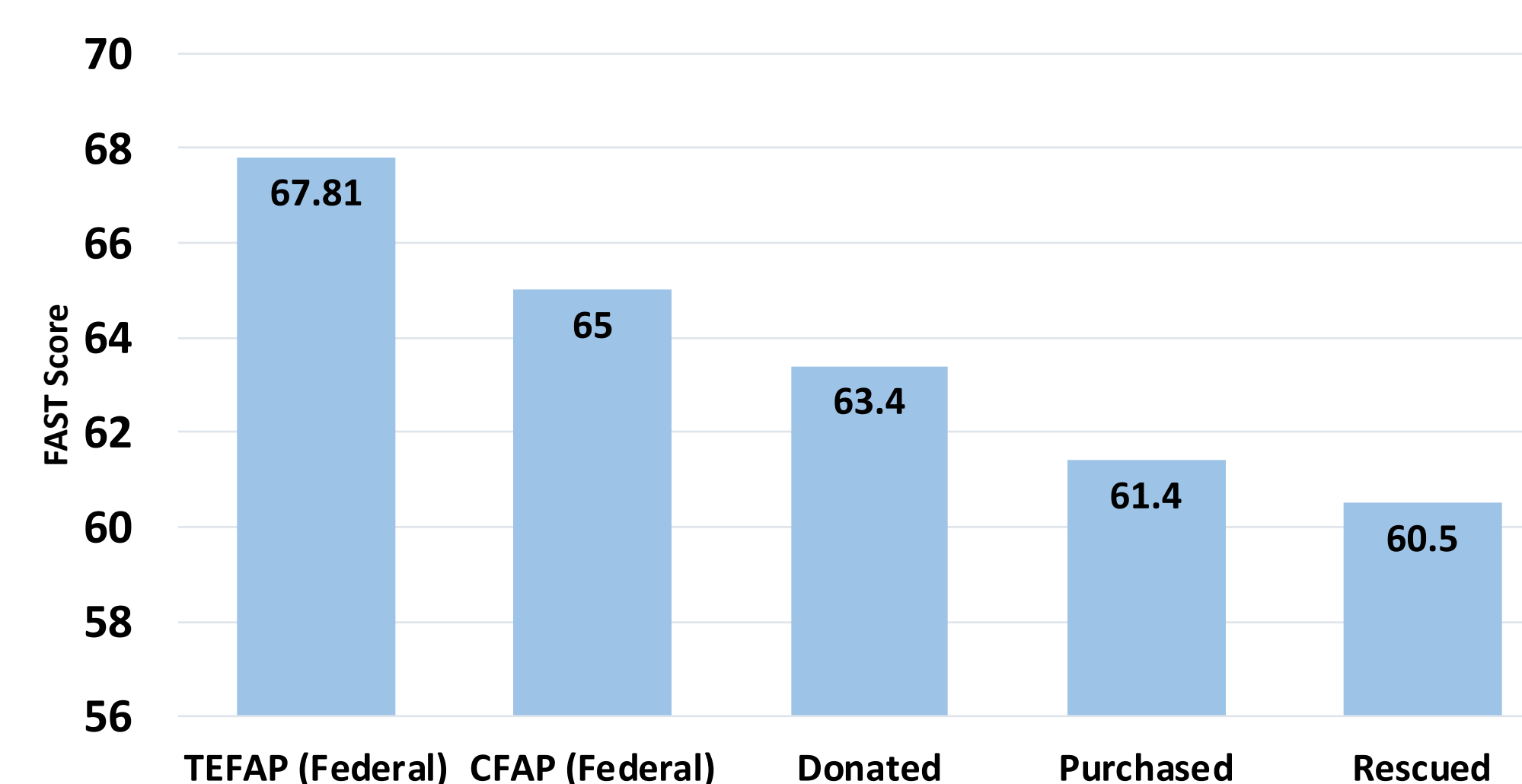
Association of program inventory FAST with program characteristics

- All food sources were positively associated with FAST scores in all programs. Proportion of federal pounds through the TEFAP program contributed most to the overall healthfulness of the inventory compared to other sources.

- Dry food storage was negatively associated with FAST (p<0.05)

DISCUSSION

Conclusions

- Ensuring the overall healthfulness of all food sources available to the programs through food banks is a crucial first step toward healthy hunger relief.
- Enabling programs to prioritize federal food may lead to a more equitable stocking of a healthier inventory.

Implications

- Food banks should consider healthier food procurement policies by accepting healthier food donations, purchasing high quality foods, and placing TEFAP food orders to the USDA – all in compliance with the new Charitable Food Guidelines that limit consumption of saturated fats, sodium and sugar.[6]
- Building capacity of pantries and other hunger relief programs to increase availability of perishable foods (fresh produce, dairy, meat) will need to be a step in tandem with improving the overall stock of perishables at the food bank level.

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