# Cost and affordability of current, healthy and sustainable diets in Argentina

Florencia Cámara\*; Leila Guarnieri\*; Victoria Tiscornia\*; Luciana Castronuovo\* \*FIC Argentina

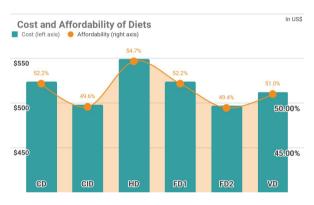


**Objective**: To estimate the cost and affordability of healthy and sustainable diets in comparison to less healthy and sustainable diets in Argentina.

## METHODS

- **Model diets** were developed considering: i. a typical household structure<sup>1</sup>, ii. the INFORMAS framework<sup>2</sup>, iii. local dietary guidelines<sup>3</sup>; and iv. Eat Lancet recommendations<sup>4</sup>.
- Current Diet (CD), Healthy Diet (HD), Current Isocaloric Diet (CID), three versions of the Sustainable Diet (two flexitarian diets and a vegan diet: FD1, FD2 and VD) modeled by nutrition experts.
- 123 food and beverages products were included in the diets.
- Average prices of each product were estimated using *Precios Claros* website data (april/may 2020).
- Average costs of each diet were calculated by Monte Carlo Simulation (10,000 replications).
- Affordability was estimated as the percentage of a monthly salary that is needed to buy the diet for a typical household.

### MAIN RESULTS



**There are differences** in the cost and affordability of the diets.

**The HD average cost** (548.8 US\$) is approximately 5% more expensive than the CD (523.7 US\$) and 10% more expensive than the CID(497.6 US\$).

**The CD and the FD1** have similar average cost (523.7 US\$).

**The FD2** (less animal protein included that de FD1) is the cheapest diet (496.4 US\$) and it has similar average cost than the CID.

**54.7% of the average family income is needed to buy a HD** while 49.4% is needed to buy a FDI. In general (50% of average household income is considered as a threshold for affordability).

**Groups that most contribute to the higher cost of HD:** i. fruits and vegetables, and ii. lean meats and eggs. The cost variability is higher for current diets, mainly due to the greater variability in their composition, while the VD has the lowest variability in the cost. We found the same cost trends than in the previous study<sup>5</sup>, but more variability and overlapping of the cost in the present one.

### CONCLUSION

Being aware of the cost and affordability of current, healthy and sustainable diets is an extremely important tool for the design of effective public policies to reduce obesity and NCDs in Argentina and to promote a sustainable environment.

Although FD2 diets are the least expensive, the affordability analysis shows that even these diets require almost 50% of the average income to acquire them. Since fruits and vegetables are the food groups that contribute most to the cost of healthy and sustainable diets, it is important to develop policies to increase the affordability of these food groups. This work suggests that: I. Argentina's dietary guidelines should be updated to align with international recommendations on sustainable diets; and II. **there is an opportunity to promote diets that are both healthy and environmentally sustainable**.

#### References:

<sup>1</sup>Male 45 YO, female 45 YO, boy 14 YO and girl 7 YO. <sup>2</sup> Vandevijvere S, Mackay S, Waterlander W: INFORMAS protocol: food

<sup>2</sup> Vandevijvere S, Mackay S, Waterlander W: INFORMAS protocol: food prices module. Journal contribution. The University of Auckland. 2017. <sup>3</sup> Dietary guidelines for the argentine population. Health Ministry. 2019. Available here.

<sup>4</sup> Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. The Lancet Commissions. 2019.
<sup>5</sup> Giacobone, G., Tiscornia, M.V., Guarnieri, L. et al. Measuring cost and affordability of current vs. healthy diets in Argentina: an application of linear programming and the INFORMAS protocol. BMC Public Health 21, 891 (2021).



