

# *Building a Consumption Measure for Inequality and Poverty Analysis*

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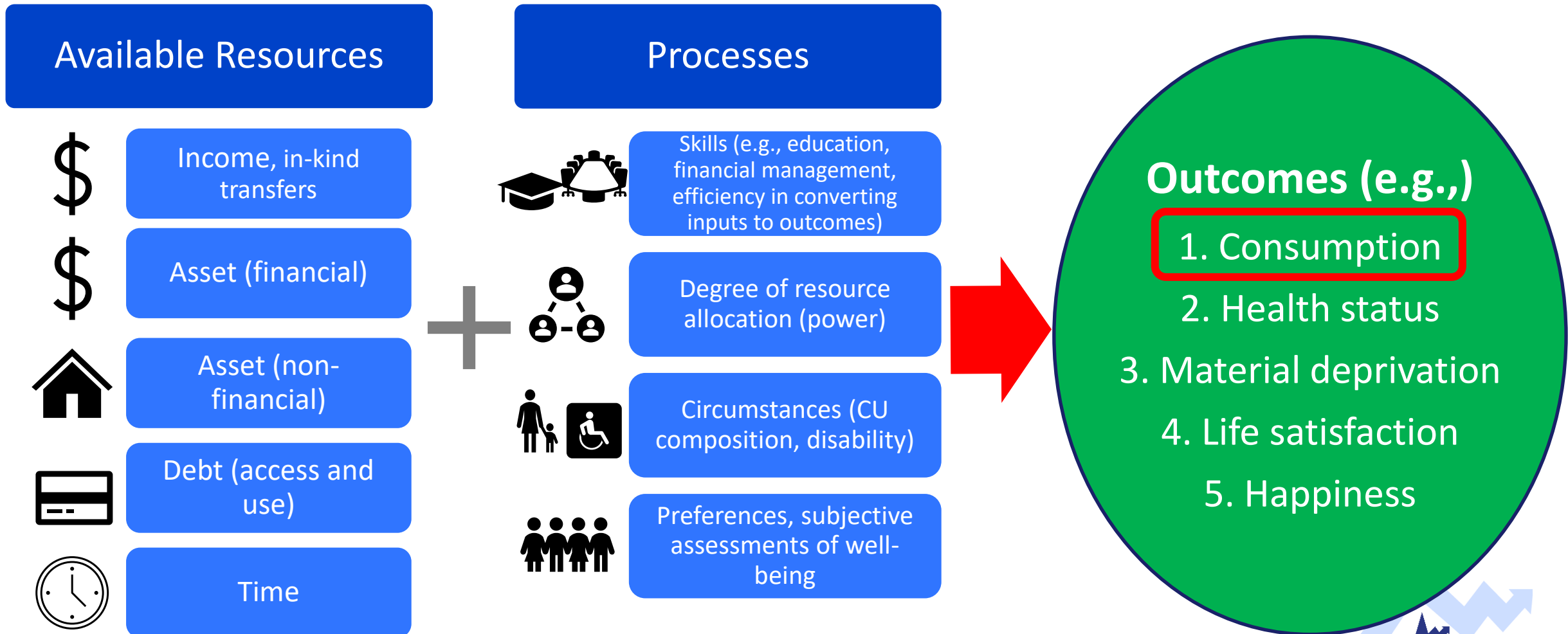
# Why Produce a Comprehensive Consumption Measure?

- Alternative measure of well-being based on outcomes
- Need to go beyond expenditures: Period of COVID-19 and consumption of home production
- Supports work and recommendations
  - ▶ Interagency Technical Working Group (ITWG) on Evaluating Alternative Measures of Poverty (2020)
  - ▶ CNSTAT Panel An Integrated System of U.S. Household Income, Wealth, and Consumption Data and Statistics to Inform Policy and Research (present)
  - ▶ OECD expert groups on distributions of income, consumption, and wealth (micro and macro groups)
- Related academic work: Meyer and Sullivan (2012); Fisher, Johnson, and Smeeding (2015)

❖ *NOTE: Have presented earlier work on progressions of our measure and used in inequality and poverty at various venues during 2022 (e.g., ASSA, APPAM, SGE, OECD, CNSTAT, FESAC, JSM)*



# BLS Initiative Focuses on Consumption as a Well-being Outcome as A Function of Resources and Processes



# Outline

- Definitions of consumption expenditures/spending and consumption
  - ▶ OECD Expert Group on Distribution of Household Income, Consumption and Wealth report (2013)
  - ▶ Interagency Technical Working Group (ITWG) on Evaluating Measures of Poverty report (2020)
- Our approach
- Analysis and results
  - ▶ Inequality
  - ▶ Poverty
- Summary and future work



# Consumption Expenditures vs Consumption: Key differences

- Durables – expenditure vs flow of services
- In-kind transfers
- Household Production
- Gifts and barter
- Problem categories (investment vs consumption):
  - ▶ Education
  - ▶ Health



# Health in a Consumption Measure

- Medical goods and services spending
  - ▶ Investment in future health (eg Grossman model)
- Health Insurance
  - ▶ Value of risk protection → current consumption
- Valuing HI
  - ▶ Market value (or cost for gov programs)
  - ▶ Fungible value
  - ▶ Willingness to pay
- ITWG recommendations

# ITWG Recommendation: What to Include in Consumption

- Expenditures for own consumption



- In-kind benefits public and private



- Flow of services



- Health insurance
  - ▶ With and without



# Data Sources

## For Most Goods and Services:

### *U.S. Consumer Expenditure Survey Interview*

- Time period: 2020Q2-2021Q1 to represent 2020
- Interviewed up to 4 times, 3-month recall
- Consumer unit (CU)
- Out-of-pocket spending for most goods and services
- Rental equivalence for owned shelter
- Rent paid & characteristics to impute market rents when in-kind rental assistance
- Stock of cars and trucks to produce flow of services

## In-kind Employer Benefits

- Medical Expenditure Panel Survey (MEPS-IC) from the Agency for Healthcare Research and Quality: employer-provided health insurance

## Other In-kind Federal Government Benefits

- CPS-ASEC (households/members): reported receipt of government provided in-kind benefits
  - ▶ School meals (NSLP)
  - ▶ Women, infants, and children (WIC)
  - ▶ LIHEAP (receipt and values)
- USDA: food assistance programs
- Center for Medicare and Medicaid Services (CMS) National Health Expenditure (NHE)
  - ▶ Medicare
  - ▶ Medicaid

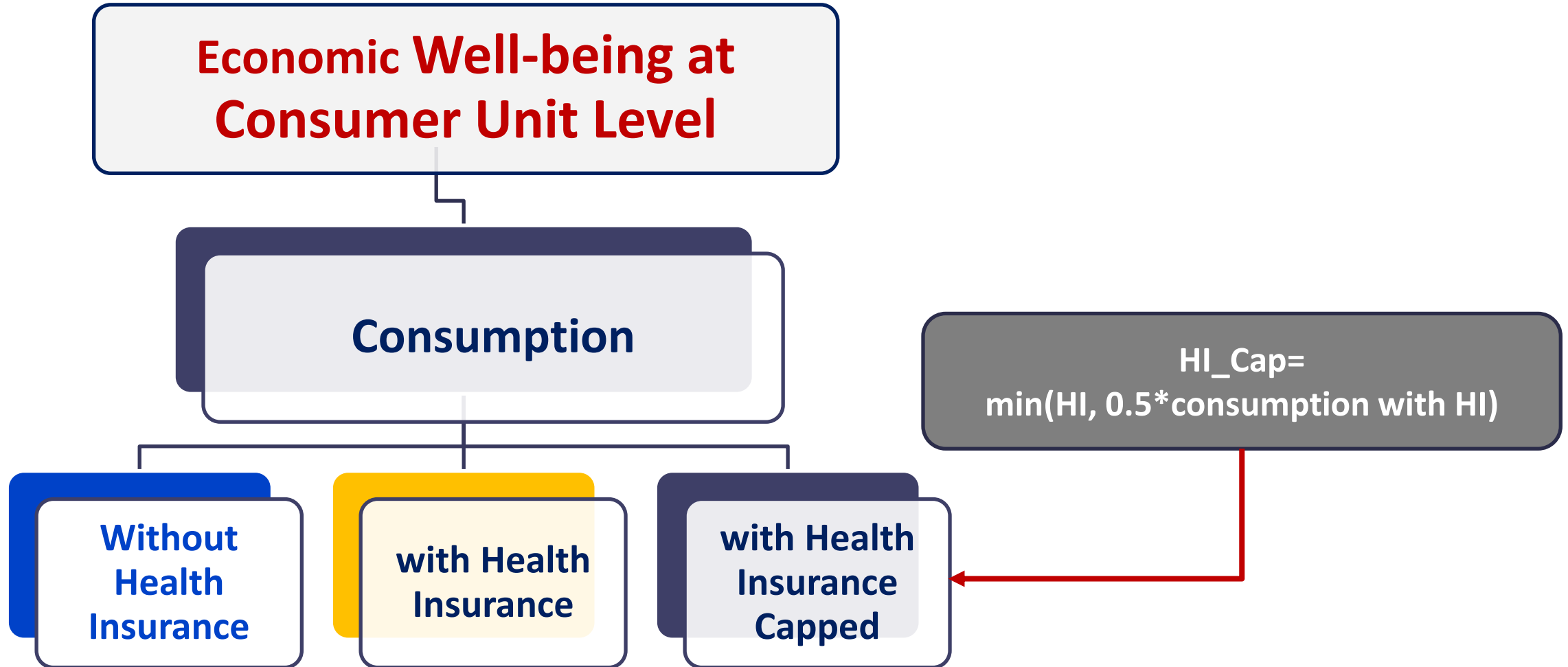


# Addition Methodological Notes

- Gifts and Barter – exclude spending on housing and utilities for non-CU members
- Household production – not included in this version
- Limits of imputation



# Measures Produced for Analysis



NOTE: None of these measures include "Education"

# Method to Produce Inequality and Poverty Statistics

- Apply equivalence scale to adjust for differences in consumer unit size
  - ▶ 3-parameter equivalence scale (same as used for SPM thresholds)
  - ▶ Assign equivalized value to each person within CU (i.e.,  $\text{population weight} = \text{FINLWT21} * \text{CUsize}$ )
- Distributional and inequality analysis (consumer units and person population weighted)
  - ▶ Rank people by equivalized values to derive cutoff points for deciles, weight by persons
  - ▶ Aggregate inequality measures and results by deciles
- Poverty Analysis (population weighted)
  - ▶ Relative poverty threshold as 60% of median equivalized measure values
  - ▶ Absolute poverty threshold set as the same for all measures (set to the relative threshold for capped health consumption).
  - ▶ Show “annualized” relative thresholds equivalized to those for 2 adults and 2 children
  - ▶ Poverty rates for total U.S. population and for subpopulations of the “poor”

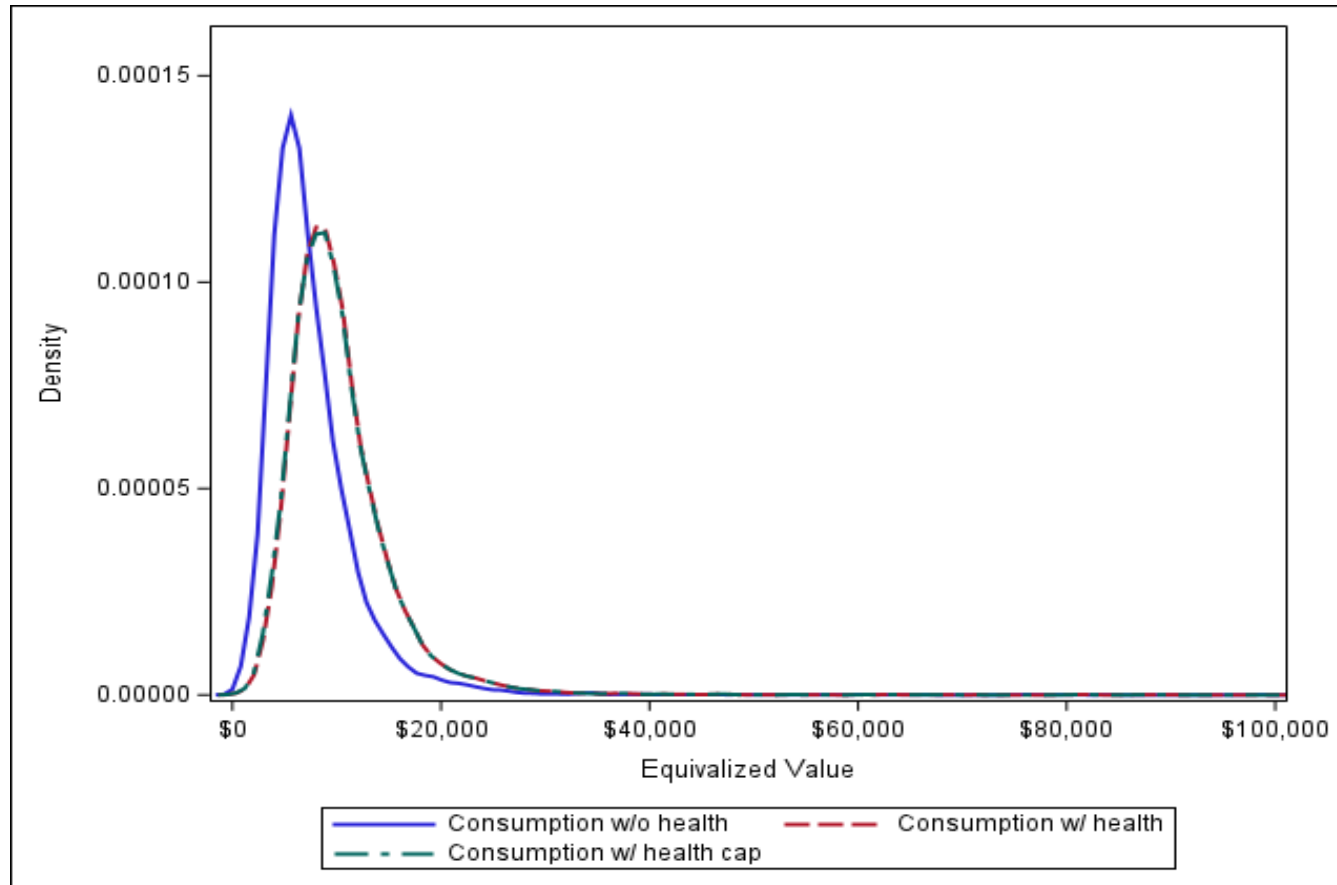
# Results and Analysis

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- ▶ Basic statistics
- ▶ Inequality and distributions
- ▶ Poverty



# Moving from Consumption to Consumption with Health Insurance: Densities of Quarterly Equivalized Values: 2020

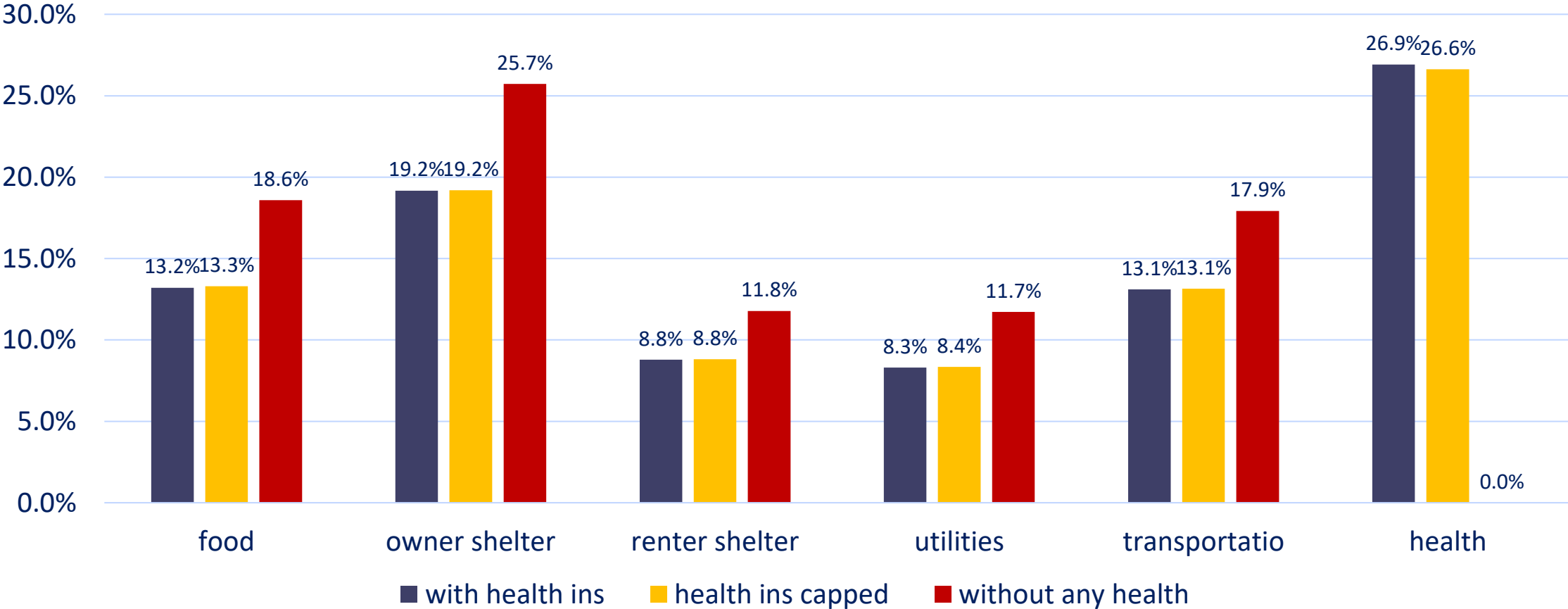


	Mean	Median
Consumption w/o Health	\$7,567	\$6,565
Consumption w/Health Insurance Only	\$10,260	\$9,333
Consumption w/Health Insurance Capped	\$10,206	\$9,275

NOTE: Based on quarterly adult equivalized values; population weighted (FINLW21\**Cusize*); consumption with health only includes health insurance; measures do not include Education; unweighted sample size=20156



# Average Consumer Unit Shares for Select Consumption Groups: 2020



NOTE: Based on quarterly values for Consumer Units, population weighted as (FINLWT21\*CU); measures do not include Education; unweighted sample size=21270 (10 observations with 0 or negative values dropped)

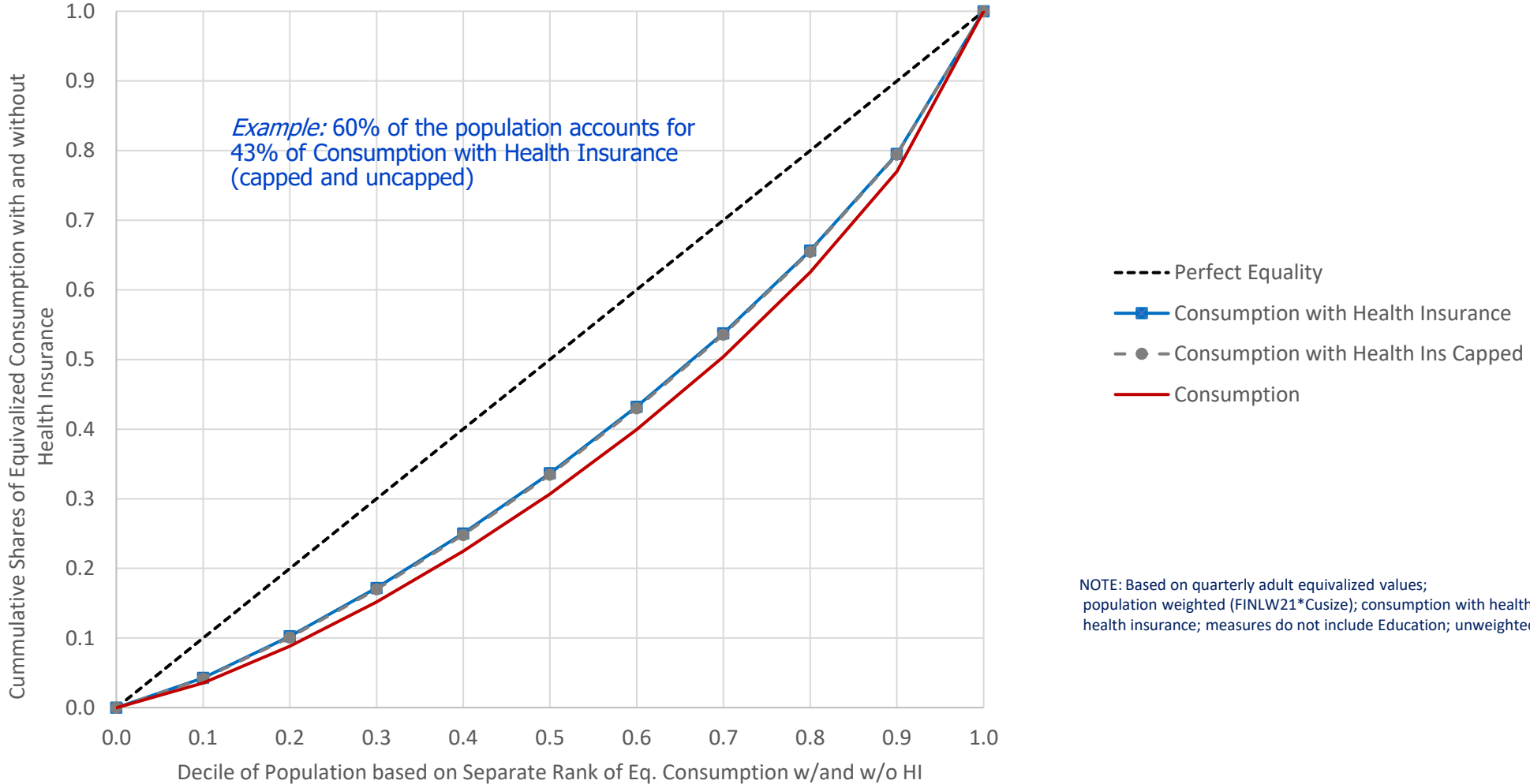


# Inequality and Distributional Analysis

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# Lorenz Curves of Equivalized Consumption with and without Health Insurance: 2020



NOTE: Based on quarterly adult equivalized values; population weighted (FINLW21\*Csiz); consumption with health only includes health insurance; measures do not include Education; unweighted sample size=20156



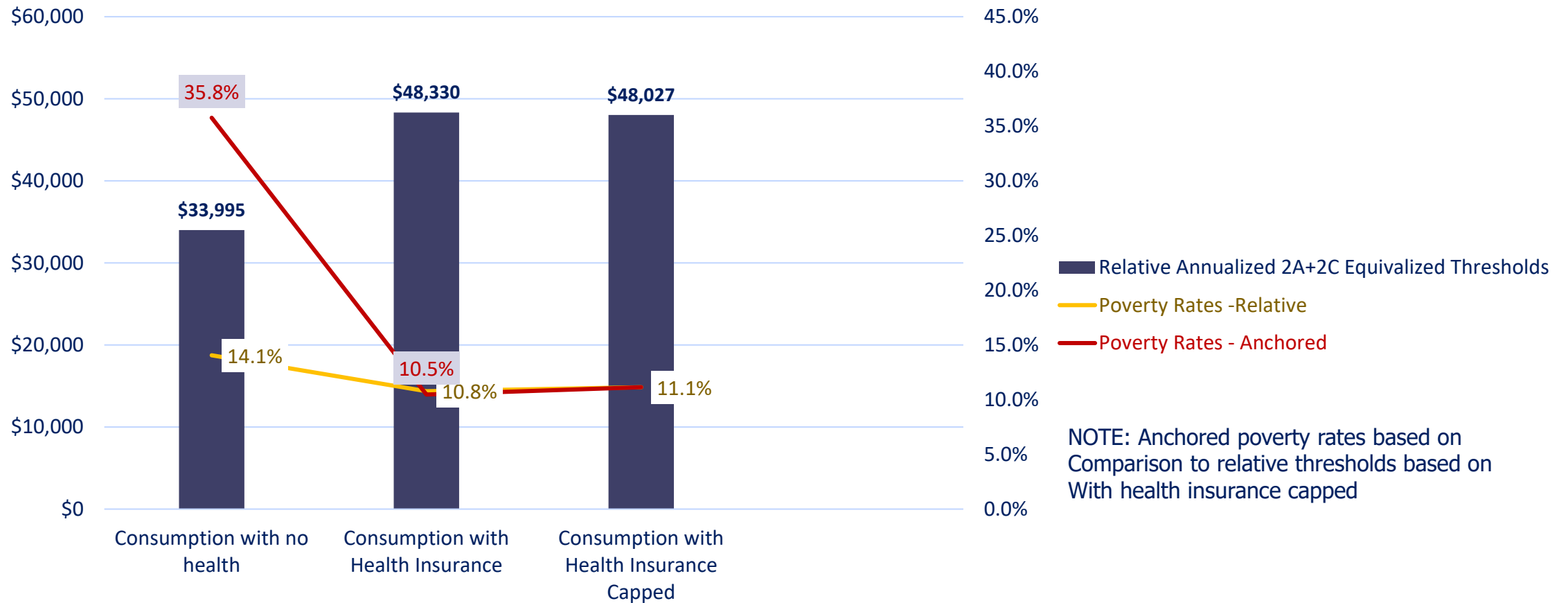


# Poverty Measurement and Analysis

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# Annualized 2A+2C Relative Poverty Thresholds and Person Poverty Rates: 2020



NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Cusize); consumption with health insurance not capped and capped at 50% of total; measures do not include Education; unweighted consumer unit sample size=20156



# Demographic Characteristics of the U.S. Population Compared to Study-defined “Poor”: 2020

Characteristic of Consumer Unit	U.S. Population	Below Consumption without Health Threshold	Below Consumption with Health Insurance Threshold	Below Consumption with Health Insurance Capped Threshold
<i>Presence of Members &gt;=65</i>				
Yes	24.6%	24.0%	13.8%	15.6%
No	75.4%	76.0%	86.2%	84.4%
<i>Presence of Children &lt;18</i>				
Yes	50.3%	63.3%	65.5%	64.7%
No	49.7%	36.7%	34.5%	35.3%
<i>In-kind</i>				
LIHEAP	2.6%	8.5%	4.8%	5.4%
NSLP	20.3%	23.0%	28.0%	26.3%
WIC (including infant formula rebate)	3.6%	9.9%	6.5%	7.4%
Rental assistance	1.0%	2.3%	1.7%	2.0%

NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Csuzie); consumption with health insurance not capped and capped at 50% of total; measures do not include Education; unweighted consumer unit sample size=20156



# Public Assistance and Health Imputations of the U.S. Population Compared to “Poor”: 2020

Characteristic of Consumer Unit	U.S. Population	Below Consumption without Health Insurance Threshold	Below Consumption with Health Insurance Threshold	Below Consumption with Health Insurance Capped Threshold
<i>With Health Insurance Imputation by Type</i>				
Employer provided only	44.0%	19.5%	24.0%	22.6%
Individual ACA only	1.6%	1.1%	1.6%	1.5%
Medicare only	12.4%	9.6%	6.2%	6.5%
Medicaid only	11.2%	31.8%	19.6%	21.3%
CHIP only	0.7%	1.5%	2.7%	2.7%
Other only	1.2%	0.8%	1.7%	1.6%

NOTE: Thresholds based on quarterly adult equivalized values; population weighted (FINLWT21\*Cusize); consumption with health insurance not capped and capped at 50% of total; measures do not include Education; unweighted consumer unit sample size=20156



# Summary

- Consumption with health insurance capped follows ITWG recommendations for poverty measurement
- Progress in defining consumption measure
  - ▶ Added imputed rents for CUs living rent-free
  - ▶ Added proxy for rental expenses for college students
  - ▶ Limited to consumption of members within the consumer units ( UCCs as “nogift”) for shelter and utilities
- As move from consumption without to consumption with health insurance
  - ▶ More equal distributions
  - ▶ Lower poverty rate based on consumption with health insurance when using a relative threshold
  - ▶ **Result when capped versus not**

# Future Work

- Improve Imputations
- Address underreporting
- Refine the cap
- Evaluate options to include education
- Add value of home production for own consumption
- Continue with inequality and poverty analyses
- Add more years to our analysis
- Progress will be posted on <https://www.bls.gov/cex/consumption-home.htm>



# Contact

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# Additional Results

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# Aggregate Inequality Indices for Consumption with and without Health Insurance: 2020

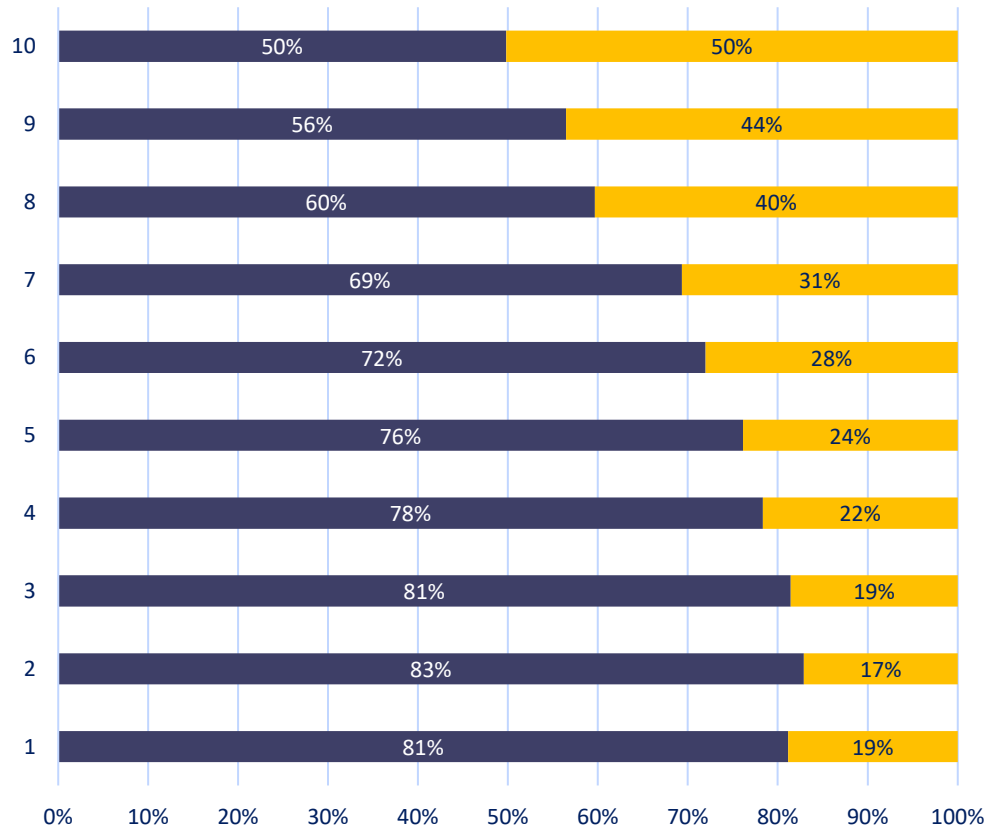
		Consumption		
		No Health	Health Insurance	Health Insurance Capped
Gini		0.285	0.240	0.243
Thiel		0.145	0.101	0.104
Mean log deviation		0.139	0.097	0.100
CV		0.191	0.125	0.128
90/10 ratio		3.480	2.867	2.919

NOTE: Based on quarterly adult equivalized values; population weighted (FINLW21\*Cusize); consumption with health only includes health insurance; measures do not include Education; unweighted sample size=20154; restricted so all based on Same sample, dropped 4 observations due to consumption\_4=0..20

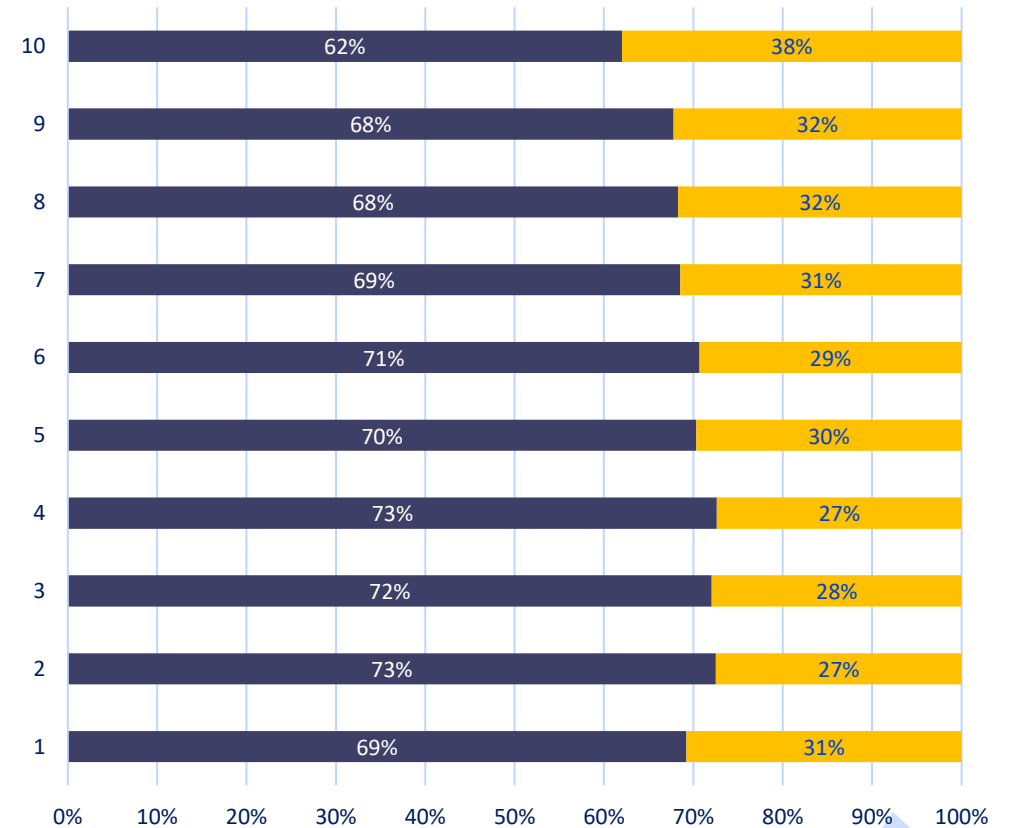


# Distribution of CUs by Presence of Member $\geq 65$ within Deciles of Eq. Consumption with and without Health Insurance: 2020

## Consumption with Cap Health Insurance Deciles



## Consumption without Health Insurance Deciles



if no members 65+  
 if members 65+

NOTE: Based on quarterly consumer unit; deciles based on population weighted (FINLW21\*Cusize); consumption includes health insurance; measures do not include Education; unweighted sample size=20158

