



# Can commercial data help in measuring and accelerating obesity prevention efforts?

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Measurement Strategies for Accelerating Progress in Obesity Prevention Workshop  
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# Our Food Supply

<b>Types of foods &amp; beverages</b>	<b>Raw &amp; Perishable</b>	<b>Packaged and processed</b>	<b>Prepared</b>
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‡ Poti & Popkin, JADA, in press  
§ Ng, & Popkin, under review

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# Locations of purchase and consumption

Types of foods & beverages	Raw & Perishable	Packaged and processed	Prepared
Locations of purchase	Grocery, supermarket, tienda, farmer's market, cafeteria	Grocery, supermarket, tienda, convenience stores, vending machines	Quick service, Full service, grocery stores, cafeteria (school, work)
Locations of consumption	Home, cafeteria	Grocery stores, cafeteria, on-the-go, school, workplace, home	Quick service, Full service, grocery stores, cafeteria (school, work), on-the-go, home





# Public monitoring of our Food Supply

Types of foods & beverages		Raw & Perishable	Packaged and processed	Prepared
Public data	Intake	NHANES Foods as reported	NHANES Foods as reported	NHANES 2007/08: 30% of calories prepared away from home 34% of calories eaten away from home ‡
	Food composition	USDA SR, FNDDS, MPED ~7,500 USDA food codes >60 nutrients		



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Commercial data	Sales/purchase	Household panel until 2006 only	Retail Scan & household panels 600,000 UPCs	Consumer panels
	Nutrition	USDA SR	~ 200,000 unique formulations § Limited to NFP requirements	At least 1,800 Fast Food items/meals Limited to NFP requirements





# Disconnect between measurements and with our Food Supply

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# Why turn to commercial data?

- Other limitations of publically available data
  - Some subpopulation sample sizes too small
  - Sample design issues (e.g., North in summer, South in winter)
  - Does not measure usual intake (typically only 2-3 day recalls)
  - Significant lag time (e.g., 2 years for NHANES)
- Need to enhance our ability to monitor our food and nutrition environment, in order to create effective programs and policies across the areas of agriculture, economic development, welfare and public health.
- Research Groups who have been working with commercial data
  - Marketing & business schools
  - UNC Food Research Program
  - Economic Research Service, USDA
  - Many agricultural economics departments in US, Canada and UK







# Considerations

- Representativeness
  - of total US
  - of subpopulations (esp. vulnerable subpopulations)
  - of usual intake (rather than snapshots)
  - How about selection and attrition?
- Level of detail
  - Unit of observation (individual, household, store, market, national)
  - Geography (county, state, MSA, US total)
  - Time (weekly, 4-weekly, quarterly, annual)
- Accuracy
  - Response bias/ responder burden
  - Updatedness
  - Rounding
- Time to access & longevity
- Cost (will depend on above)





# Commercial data at the UPC level

- Point-of-sale store scanner data
  - Sales (volume, dollar) at the UPC level for F&B products with UPC for each week-year collected from food/grocery stores, drug stores, mass merchandisers (F/D/M) and convenience stores; includes promotion & prices; can also get calculated measures on %sales change due to any promotion, price decrease, feature and/or display
  - Nielsen Scantrack & SymphonyIRI Total Store Advantage
- Household panel scanner data
  - Panel data of household purchases at the UPC level for F&B products with UPC for each shopping occasion; includes promotion & price paid
  - Nielsen Homescan (>50,000 households per year)
- Packaged food nutrition data
  - Label information at the UPC level for F&B products including Nutrition Facts Panel data and ingredient list: Gladson Nutrition Database
  - Basic nutritional attributes at the UPC level for newly introduced F&B products: Datamonitor Product Launch Analytics and Mintel F&B





# Major concerns with commercial data (see handouts)

- Sales
  - Representativeness due to retailers and venues missed
  - Costs (Scantrack is cheaper in comparison)
- Purchase
  - Representativeness due to AFH foods
  - Bias
  - Costs
- Nutrition Facts Panel
  - Updated comprehensively to capture reformulations?
  - Limited to basic nutrient information (& rounded values based on Nutrition Labeling Regulations)
  - Problems will propagate to related UPCs
  - Limited prior data





# Using commercial data in conjunction with public data

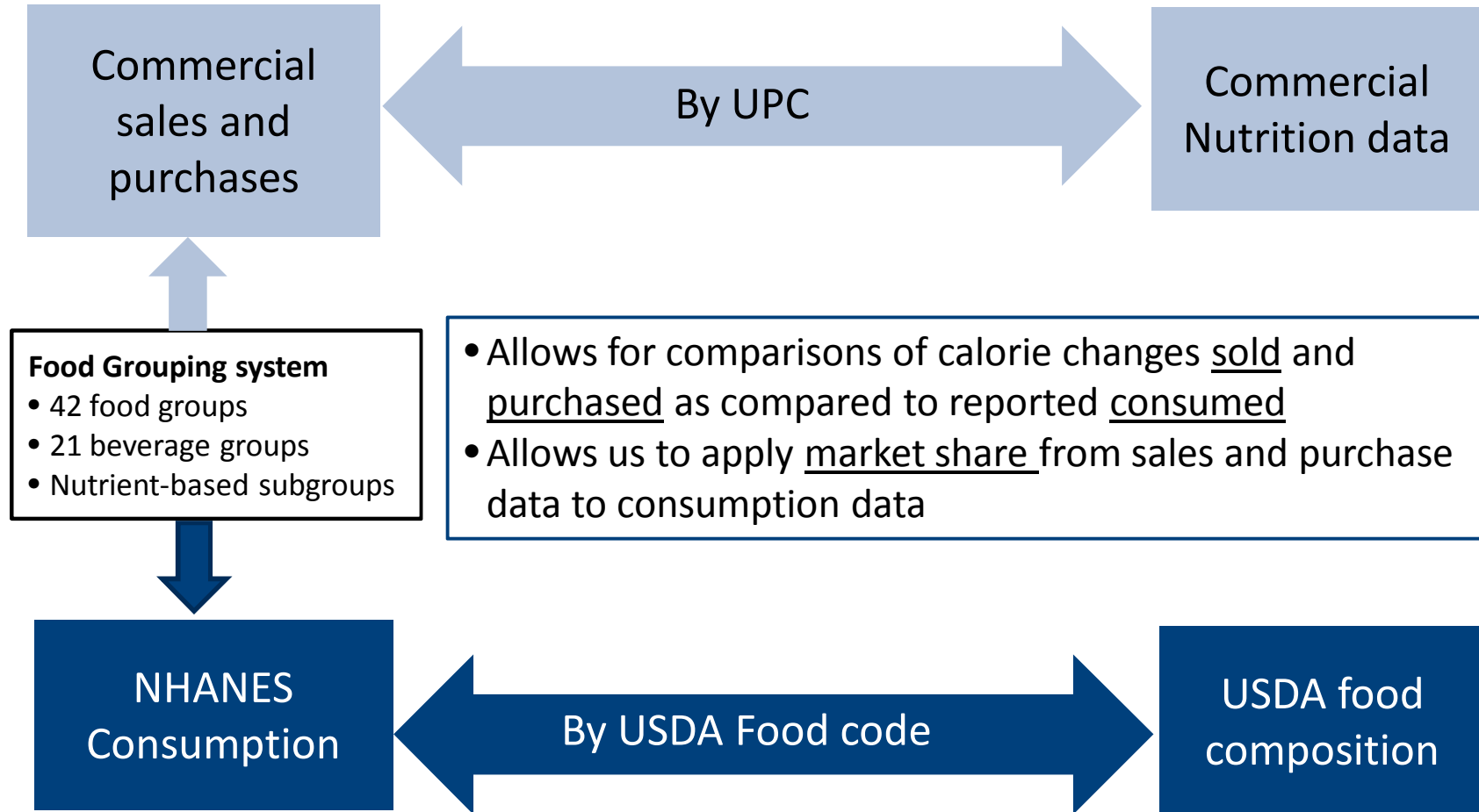


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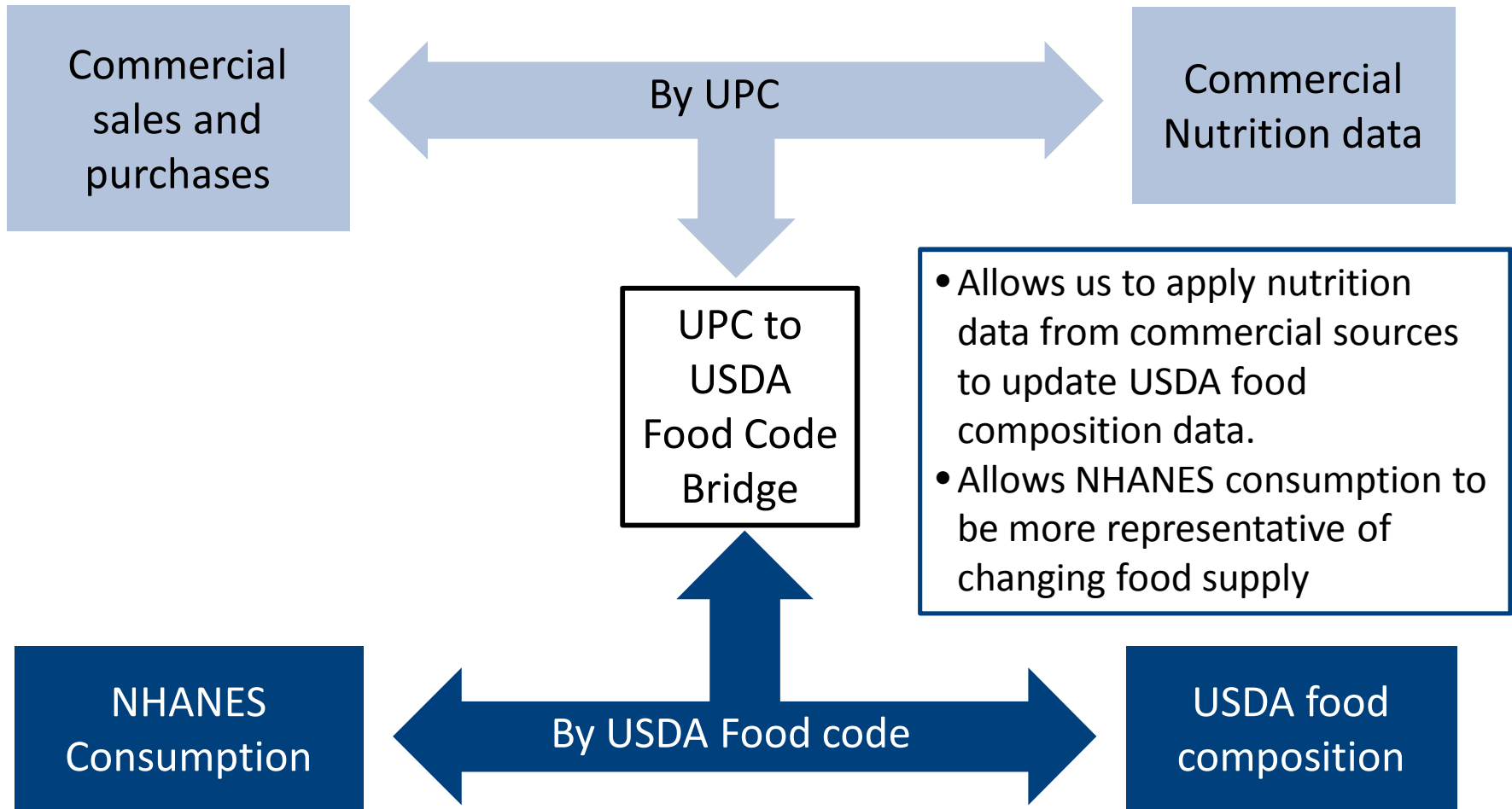


# How to capture product changes in NHANES





# How to capture product reformulations and introductions in NHANES





# Data and knowledge integration

- To maintain relevance, needs to be updated annually
- Significance and application
  - Cross-validations: Constructing multiple years of these datasets will allow for trend analyses to determine whether both kinds of datasets produce consistent findings.
  - Improve on existing FCTs to make them more reflective of the rapidly changing food supply using information from the commercial NFP label data sources
  - E.g., Gladson NFP label data includes the full ingredient list, whereas the FNDDS recipe file often does not. We used ingredients lists of 68,477 products from the 2007 and 2010 Gladson NFP label data to identify ready-to-eat cereals, bars and cookies reported in NHANES 2007/08 that contain fruit juice concentrate as an added sweetener.





## How might the use of commercial data accelerate obesity prevention efforts?

- Monitoring and measuring changes: “What gets measured, gets changed”
- Promote self-regulation by food manufacturers, retailers and food service
- Encourage marketing companies to collect information useful for public health research
  - Typical clientele: food companies, retailers and service; marketing & business schools
  - Public Health is a new market and Nielsen (and perhaps others) are definitely interested







## Limitations still exist

- If using only UPC data, will miss:
  - Away-from-home foods (restaurants, cafeteria, concessions, vending)
  - Foods without UPCs (e.g., random weight items, farmer market purchases)
- Important considerations that are unknown and out of direct control of researchers:
  - Sampling frame of commercial data
  - Comprehensiveness of how updated commercial NFP data is
- Costs can be significant





## Potential resources

- NCCOR Catalog of Surveillance Systems
- University of Chicago Kilts Center for Marketing
  - Nielsen is providing Homescan and Scantrack data (at brand level or higher)
  - Academic researchers will be able to submit a research proposal to gain access to the Nielsen data
- Economic Research Service, USDA
  - Created multiple databases using Nielsen Homescan
  - CNPP food prices database (2001-2004)
  - QFAHPD (1999-2009 and will be updated)

