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**The Potential for Mobile Markets to Improve Food Access and Affordability:
A Market Basket Analysis**

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What are Mobile Markets?

- Tucson Community Food Bank operates a Value Food Store (VFS) selling groceries at 30-70% discount
- Mobile Markets take VFS products to isolated areas of Pima County
 - New Pascua Yaqui Pueblo: Closest 2 stores 2.7 – 4.25 miles away
 - Old Nogales Highway Colonia: Closest 2 stores 5 – 5.6 miles away
 - For comparison, 90% of California population within 2 miles of full service grocery store

Research Questions

- How does the cost of the Thrifty Food Plan in the study area compare with the rest of the United States?
- What is the extra cost of purchasing a healthier market basket?
- Are healthier items available at stores near the study area?
- How much could Mobile Market purchases reduce the cost purchasing the TFP and healthier market baskets?
- How much do Mobile Market customers save on their actual purchases (because purchased items may not always match market basket items)?

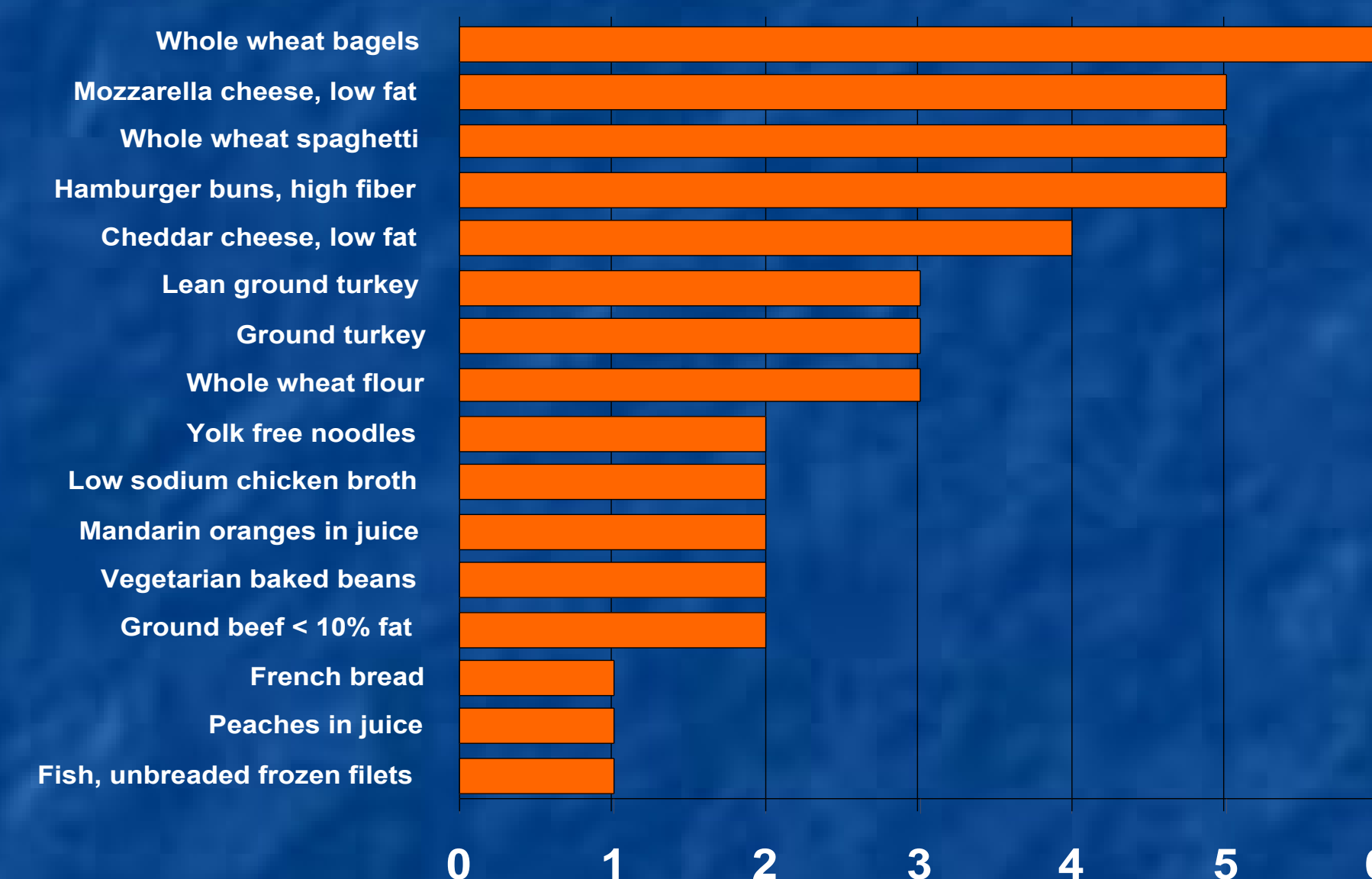
Methods & Data

- Interviewed mobile market customers about
 - Food shopping behavior
 - Self-reported change in behavior
- Grocery stores surveyed to construct market baskets
 - Thrifty Food Plan (TFP)
 - Healthier Basket based on Jetter & Cassidy study
 - 80% less fat
 - Substantially more fiber
- Mobile market substitution
 - Substitute mobile market prices into market baskets
 - Recalculate basket cost and savings from mobile markets
- Cost savings from actual mobile market (mm) purchases
 - Begin with actual mm purchases
 - Calculate costs of these purchases if made at nearest grocery store

Result 1 – Healthier basket costs 12% more than TFP

	2006	2007	Both Years
TFP	\$105.25	\$115.18	\$110.22
Healthier Basket	\$115.58	\$131.58	\$123.58
Cost Difference	\$10.33	\$16.40	\$13.37
Percent Difference	10%	14%	12%

Result 2 – Whole grains, lower fat cheeses & meats most likely to be missing at local grocery stores



Result 3 – Shopping at mobile markets reduce market basket costs \$9-\$12 / week (8-11%)

	2006	2007	Both Years
Baseline cost savings			
Cost savings with mobile market substitution (\$)			
TFP	\$9.42	\$14.48	\$11.95
Healthier	\$6.62	\$12.50	\$9.56
Cost savings with mobile market substitution (%)			
TFP	9.5%	12.3%	11.2%
Healthier	6.1%	9.4%	8.0%

Result 4 – Mobile market prices substantially less than at local grocery stores

	Low Volume	Higher Volume
Cost of Items Sold	\$137.12	\$266.71
Difference from Mobile Market Cost	\$54.43	\$99.01
Store Cost as a % of Mobile Market Cost	166%	159%
Mobile Market % Discount from Store Cost	39%	36%
Community Cost Reduction per Dollar of Mobile Market Sales	\$0.66	\$0.59

Result 5 – Cost effectiveness hampered by extremely small sales volume

	Low Volume	Higher Volume
Total Community Cost Reductions per Mobile Market Visit	\$54.43	\$99.01
Community Cost Reduction per Dollar of Mobile Market Sales	\$0.66	\$0.59
Community Cost Reduction per Dollar of Mobile Market Labor Costs	\$0.40	\$0.73

Discussion

- Mobile markets offered significant **percent** cost reductions
 - Items purchased at mobile markets would cost >59% more at local stores
 - Mobile market purchases could reduce weekly costs of TFP or healthier market basket by >10%
- **Absolute** cost reduction to community quite small
 - Program has small sales volume
 - Costs of delivery high relative to local cost savings
- **Policy Postscript**
 - Tucson Community Food Bank has subsequently moved from expanding the number of mobile markets
 - Instead, now reducing number of sites
 - Expanding hours and sales volume of existing sites
 - This should improve cost-effectiveness of overall program

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