

Standards of Evidence in the Development of Health Policy

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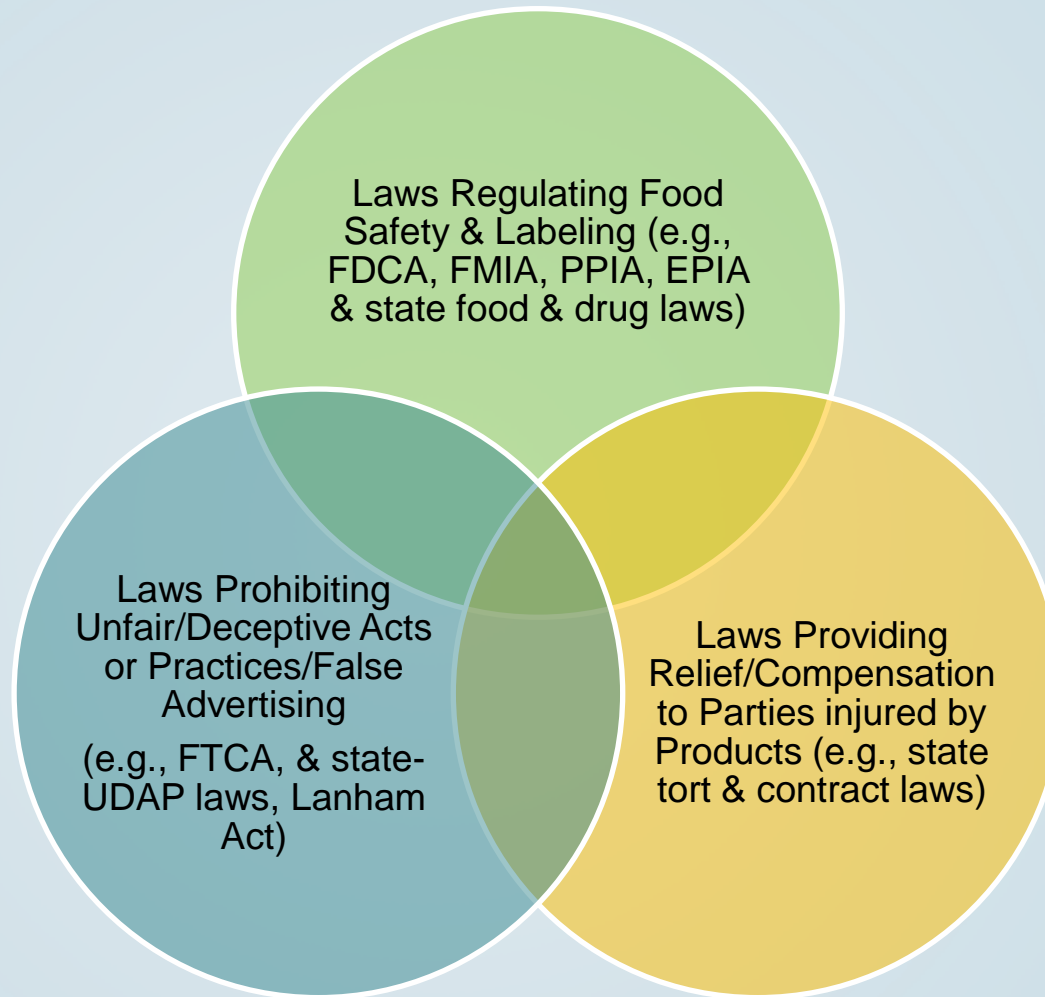
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Agenda

- Intersection of Scientific Standards & Legal Standard Governing Nutrition and Health Related Food Marketing Claims.
 - Legal Standards of Evidence for Health Benefit Claims
 - FTC, FDA, Courts
 - Problems of Proof That Hamper Healthy Food Marketing
 - The Way Forward: Some Conclusions

Food Labeling & Advertising Claims are Governed by Overlapping Federal & State Laws



Food Liability Under Federal & State Law

Alleged Defect in Product Information

(e.g., Labeling or Marketing Claims)

- Administrative Enforcement (FDA warning letter)
- Civil Enforcement
- Criminal Prosecution
- *False Advertising Litigation (e.g., class actions)*
- Commercial Litigation (Contracts/Torts)
- Insurance Coverage Litigation

Alleged Defect in Product Safety or Processing/Storage

(e.g., cGMPs, HACCP)

- Administrative Enforcement
- Civil Enforcement
- Criminal Prosecution
- False Advertising Litigation
- Wrongful Death/Personal Injury Litigation
- Commercial Litigation (Contracts/Torts)
- Insurance Coverage Litigation

FTC Evidence Standards

- First Amendment Friendly
- FTC Act section 5 prohibits unfair and deceptive acts or practices.
- State enforcement officials and private self-regulatory bodies (e.g., CBBB/NAD & CARU) follow comparable standards.
- **FTC Policy: An objective claim used to market food products is assumed to be supported by valid evidence.**
 - **Failure of food marketer to possess valid evidence before using the claim = “unfair” and/or “deceptive”**

FTC Evidence Standards

- A product marketer must possess evidence providing a “reasonable basis” for an objective claim.
- The nature and amount of evidence that is necessary to satisfy the “reasonable basis” standard will vary depending on a number of factors:
 - Type of product (e.g., “food” vs. “dietary supplement” vs. “drug”)
 - The benefits of a truthful claim and consequences of a false claim
 - The cost of developing substantiation
 - The nature/amount of evidence experts in the field believe is reasonable to support the particular claim.
 - The type of claim.

FTC Evidence Standards

- “Reasonable Basis” Standard – For a product safety or health benefit claim, a product marketer must have “competent and reliable scientific evidence,” which may include clinical testing.
 - Tests/studies must be conducted and evaluated in an objective manner by qualified persons, using procedures generally accepted in the scientific community.
 - Claim Language:
 - Claims must be tailored to fit the nature and amount of evidence and disclose material information.
 - .Where the evidence is controversial, the marketer may not claim that there is “no scientific evidence” supporting other POVs, but there is case law that the First Amendment does not allow FTC to compel the marketer to become the mouthpiece for an opposing POV.

FTC Evidence Standards

- FTC Guidance
 - “There is no set protocol for how to conduct research will be acceptable under the FTC substantiation doctrine. There are, however, some principles generally accepted in the scientific community to enhance the validity of test results. For example, a study that is carefully controlled, with blinding of subjects and researchers is likely to yield more reliable results”
 - In a 2010 FTC Consent Order, a food marketer agreed not to make claims about product benefits reducing the duration of acute diarrhea or kids’ absences from school and daycare without scientific evidence consisting of “at least two adequate and well controlled human clinical studies.”

FDA Evidence Standards

- FDA Evidence Standards Vary By Claim Type
 - For “Structure/Function” and “Dietary Guidance” Claims, FDA evidence standards are comparable to the FTC Act’s “competent and reliable scientific evidence standard.”
 - For “health claims” characterizing the relationship between a nutrient/food/substance and a disease or health related condition, FDA requires food marketers to submit a health claim petition containing evidence concerning the validity of the substance/disease relationship.
 - Scientific Evidence Evaluated Using EBM Inspired Method.
 - “Significant Scientific Agreement”
 - “Qualified Health Claim” (*Pearson First Amendment Decision*)

FDA Evidence Standards

- Evidence Based Review System for the Evaluation of Health Claims.
 - “In evaluating a petition for an authorized health claim, FDA considers whether the evidence **supporting the relationship that is the subject of the claim** meets the SSA standard.”
 - NLEA: FDA shall authorize a health claim for foods if the agency “determines based on the totality of the available evidence (including evidence from well designed studies conducted in a manner which is consistent with generally recognized scientific procedures and principles), that there is significant scientific agreement among expert qualified by scientific training and experience to evaluate such claims, **that the claim is supported by such evidence.**”

FDA Evidence Standards

- Evidence Based Review System for the Scientific Evaluation of Health Claims
 - Scope of Studies Included –
 - “Studies should identify a substance that is measurable (food or food component).
 - “Studies should identify a specific measurable disease or health related condition by measuring incidence, mortality, or validated surrogate endpoints.

FDA Standards of Evidence

- Hierarchy of Evidence
 - Intervention Studies
 - “Randomized controlled intervention studies provide the strongest evidence of whether or not there is a relationship between a substance and a disease. [RCTs] can provide convincing evidence of a cause and effect relationship . . .
 - Observational Studies
 - Well-designed observational studies can provide useful information for identifying possible associations, even the best-designed observational studies cannot establish cause-and-effect between an intervention and an outcome.

Courts: Standards of Evidence

- Burden of Proof in Civil Cases
 - Preponderance of the Evidence Standard
 - Requires the fact-finder to conclude “that what is sought to be proved is more likely true than not true.”
- Court procedures to screen expert testimony and prevent decisions by fact-finder that are based on junk science. *Daubert v. Merrell Dow Pharm* (S.Ct. 1993).
- Use of Epidemiological Evidence to Establish Causation.
 - In cases involving health outcomes relating to human exposure to a substance in the environment (e.g., toxic torts/product liability), courts are called upon to make decisions that are based on sound scientific evidence, but frequently cannot rely on RCTs.

Courts: Standards of Evidence

- Epidemiology: General Causation – Is the Exposure a Cause of the Disease?
 - Once an association has been found between exposure to an agent and development of a disease, researchers consider whether there is a true cause & effect relationship.
 - While epidemiology cannot “prove” causation, epidemiological evidence can provide a reasonable basis for concluding that a causal relationship exists for legal and health policy purposes. The judgment that a causal relationship exists must stay open to revision based on new evidence.
 - Analytical Framework: “Hill Criteria”
 - NAS/Federal Judicial Center - Reference Manual on Scientific Evidence: Third Edition

The Environment & Disease: Association or Causation? (1965)

Dr. AB Hill described guidelines to assess causation in the environmental health context in 1965 by considering all available scientific evidence from 9 different vantage points.

- All evidence is considered
- No prescribed hierarchy
- Investigate and follow the clues
- Diagnose disease hazard from the evidence
- Develop appropriate intervention to eliminate or reduce hazard (context specific standards apply).

- *Strength*
- *Consistency*
- *Specificity*
- *Temporality*
- *Biological Gradient*
- *Biological Plausibility*
- *Coherence*
- *Experiment*
- *Analogy*

Problems of Proof: FDA Health Claims Policy

- Evidence Based Review system applies standards of evidence to the evaluation the diet-related health benefit claims are inspired by EBM and depart from the scientific standards that apply to health outcomes relating to the “environment” – including the “food environment.”
 - Hierarchy – Relies on statistically significant findings from RCTs and devalues observational research studies and epidemiological methods for determining that a causal relationship has a reasonable basis.

Problems of Proof: FDA Health Claims Policy

- The Food Environment & Epidemiological Methods:
 - Example: Benefits of Adequate Essential Nutrient Intakes-
 - The evaluation of benefits that result from correcting inadequate intakes of essential nutrients are comparable to those that result from reducing exposure to an environmental hazard (lead in drinking water), since when it comes to levels of dietary exposure to essential nutrients, by definition, “inadequate” levels present a health hazard. From there, the only real scientific question to be answered to serve public health needs is how much hazard, and at what intake level will it occur.
 - Problem: FDA applies the same evidence standard to health claims regardless of the nature of the “substance.” There is no presumption of benefit even for essential nutrients.
 - Vitamin D vs. Saturated Fat vs. Plant Stanol Esters

Problems of Proof: FDA Health Claims Policy

- The Evidence Based Review Standards are applied to an expansive range of health benefit claims as a result of FDA's broad interpretation of what constitutes a "disease" claim that is prohibited in the absence of either a "drug" approval (usually infeasible for foods) or "health claim approval."
 - FDA regulations exclude from "disease" definition "diseases resulting from essential nutrient deficiencies (e.g., scurvy, pellegra)" allowing these claims to be made without premarket clearance.
 - FDA regulations do not eliminate premarket clearance requirements for claims characterizing the benefits of adequate vitamin/mineral intake more generally.
 - Compare "rickets" vs. "Vitamin D & Ca and osteoporosis"

Problems of Proof: FDA Health Claims Policy

- NLEA Rulemaking Record:
 - *“The relationship between nutrients and classical nutrient deficiency diseases are well established. Moreover, such diseases are of little public health significance in this country. Under such circumstances, FDA believes that it would not be appropriate to subject such relationships to the health claims regime . . . [A] claim about the benefits of vitamin D in preventing vitamin D deficiency, for example, would be misleading where the claim does not explain that few individuals in the United States are at risk of such a deficiency.”*
 - Because this policy was codified in regulations, it cannot be amended without notice and comment rulemaking, but the agency could issue enforcement guidance to expand the scope of the exclusion for disease benefits relating to adequate intake of essential nutrients.

FDA Warning Letter to General Mills (May 5, 2009)



- **FDA Allegations:** Cholesterol reduction claims extend beyond the scope of FDA approved claims and cause Cheerios to be both a “misbranded food” and an “unapproved new drug.”
- **FDA Drug Allegation:** “[W]e have determined that . . . Cheerios® . . . is promoted for conditions that cause it to be a drug because the product is intended for use in the prevention, mitigation, and treatment of disease.
- *“you can Lower Your Cholesterol 4% in 6 weeks“*
- *“Did you know that in just 6 weeks Cheerios can reduce bad cholesterol by an average of 4 percent? Cheerios is ... clinically proven to lower cholesterol. A clinical study showed that eating two 1 1/2 cup servings daily of Cheerios cereal reduced bad cholesterol when eaten as part of a diet low in saturated fat and cholesterol.”*

Problems of Proof: Health Claim Warning Letters

- FDA Health Claims Standards
 - FDA took the position that the combination of authorized health claim language and other factual information amounts to a new, implied health claim which requires premarket authorization by FDA.
 - Relevant Evidence?
 - FDA Authorized Health Claim
- State Standards
 - Note that false advertising cases filed under state law may require consumer survey evidence to establish the take-away meaning of the claims at issue.
 - Relevant Evidence?
 - Consumer Survey
 - Evidence supporting “take-away” meaning at issue.

Conclusions

- **Expand “Safeharbors” for marketing claims that are based on sound science.**
 - **Rewards for “Due Diligence”**
 - **Minimize the Liability Risks for Those Whose Claims Comply with Federal Law.**
- **Increase procedural flexibility to enable advances in science to be readily integrated into legal standards.**

Conclusions

- **Eliminate policies which subject conventional foods to regulation as drugs when disease prevention benefits are attributable to the conventional food/components when they are consumed as food as part of an overall healthy diet (DG).**
 - **Expand Dietary Guidance Claims to Allow “Disease” Claims Re: Healthy Dietary Patterns and Role Individual Foods Can Play in Fostering These Patterns**
- **Expand the flexibility food marketers have to convey factual, well substantiated nutrition and health information effectively in commercial marketing (First Amendment).**

Conclusions

- **Expand the health claims exclusion for nutrient deficiency diseases to include other disease benefits that are attributable to adequate vitamin and mineral intakes (e.g., Calcium + Vitamin D and Osteoporosis).**
- **Expand the use of epidemiological methods for evaluating causal relationships between nutrient/disease prevention benefits.**

Many Thanks

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