

Workshop Introduction

Food-safety Interventions: How Effective?

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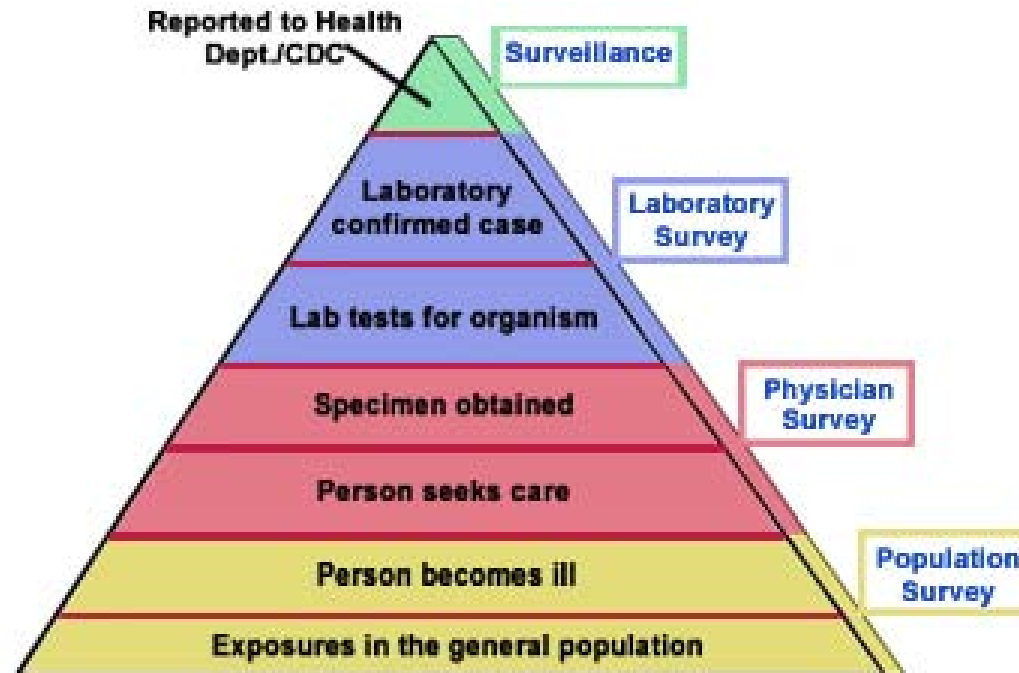
Why this workshop?

- Food topics always prominent in NCCEH surveys
- Food-borne illness is ‘common’
- FS programs account for substantial portion of EH budgets
- More emphasis on evidence based practice – need to demonstrate effectiveness
- Resources are limited – where do we get best bang for buck

How Big a Problem -Burden of Foodborne Illness?

- From C-enternet evaluation PHAC estimates 13M cases/yr foodborne illness in Canada
- Cost of enteric illness \$115 per Canadian/yr
- Estimates only, exact figures not tracked or known.
- CDC 2011 – 1 in 6 Americans (48 million people) get sick; 128,000 are hospitalized; 3,000 die of foodborne diseases
- Why don't we have better estimates of burden of illness
- What do we know about risk factors?
- *'Big' problem but how does this compare to other causes of illness?*

Burden of Illness Pyramid



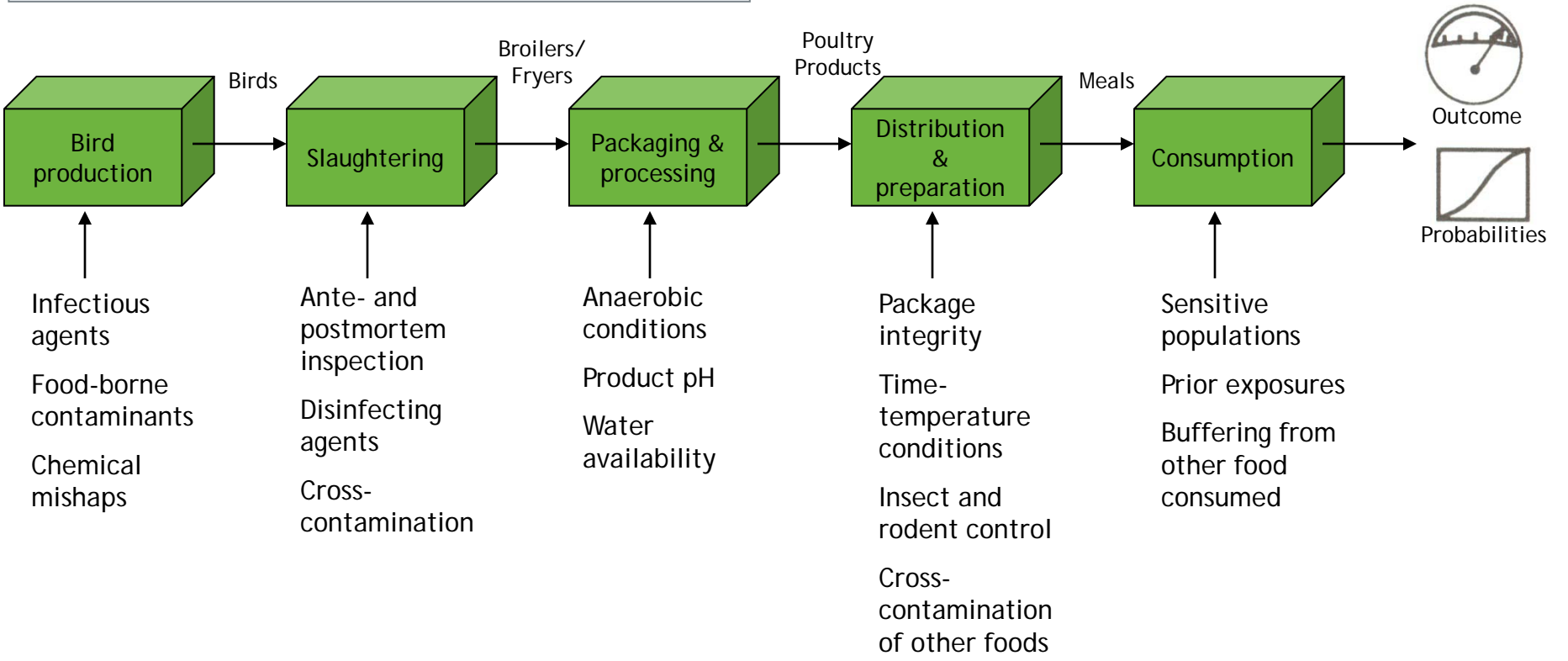
The Public Health paradigm has most frequently identified illnesses in a population, then worked backward to identify ‘causes’, and developed interventions to reduce ‘risk’ by reducing or eliminating ‘risk factors’

In some ways this is a contrast with hazard regulators’ paradigm of selecting a risk source, performing a predictive risk assessment, (i.e. working from (potential) cause to effect)

Consequences

Risk Source

Exposures



Major components of a model for poultry risk assessment

From Covello and Merkhofer

- *Chain of events model offers many places where one can intervene*
- *But how effective?*
- *Without evaluation, can't answer*

Evaluating Effectiveness

- Need to consider relevant outcomes
- Compliance with regulation or standard?
- Process based?
- Contamination at point of consumption?
- Cases of foodborne illness?

Not a trivial challenge and we are 'data deficient' in many cases

- *Are FS programs worth evaluating?*

Foodborne Illness - public health role in Ontario

- Food safety – substantial investment of resources in food safety at HU level, roughly 350 FTEs
- Permanent food premises per staff member varies across HUs but average is about 210-220 Ontario wide.
- OPHS Food Safety and Food Safety protocol
- A large (the major) component of HU Food Safety programs is inspection.

FOOD SAFETY Protocol requires;

- 1)b)iii) A monitoring and evaluation process to annually assess and measure the effectiveness of food safety strategies
- 1)c) The board of health shall conduct an annual site-specific risk assessment of each food premises and, based on the results of the assessment, shall assign a risk category for each food premises as high, moderate or low. (refer to model)
- 1)d) The board of health shall conduct inspections of all fixed food premises in accordance with the following minimum schedule:
 - i) Not less than once every 4 months for high-risk premises
 - ii) Not less than once every 6 months for moderate-risk premises
 - iii) Not less than once every 12 months for low-risk premises

- **WHAT DO WE NEED TO KNOW ABOUT FOODBORNE ILLNESS IN ONTARIO?**
 - How many cases and outbreaks of foodborne illness in Ontario?
 - What are the trends over time and within Ontario?
 - What are the foods and risk factors associated with the foodborne illness in Ontario?
 - Are the current food safety programs reducing the burden of foodborne illnesses in Ontario?
 - Are there risk factors current programs do not address?
- *How many of these questions can we answer?*

- Do we have a sufficient evidence base for identification of risk factors and their effective control?

Need to Evaluate

- Do we need evidence? We have a regulation
- Are we making a difference?
- Shouldn't we do more of 'what works'; less of 'what doesn't'?
- Are we allocating too many, too few or just the right amount of resources to our food safety versus other EH programs?
- When budgets are cut; does it make a difference if EH is cut more or less than other programs?
- When new resources are available; do we get more or less 'return' by investing in EH or other programs?

- *Reviews by NCCEH and others on evaluating effectiveness of food safety and other programs should provide key info we need.*