

Hepatitis A – A Public/Private Call to Action

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Background/Introduction

Hepatitis A is a contagious viral disease. Once exposure to hepatitis A occurs, symptoms such as fatigue, loss of appetite, nausea, and jaundice occur over a period of two to seven weeks. The virus is usually found in the stool or feces of infected individuals. The virus is typically spread when infected people do not adequately wash their hands after using the toilet or changing diapers or sheets and subsequently touch their mouths or prepare food for or touch others with contaminated hands. Good hand washing practices can prevent transmission.

An increase in the prevalence of individuals with the virus has been observed during the past several years and notably among individuals who work in the restaurant industry in eastern Massachusetts. The reasons for this include both the likelihood of high risk populations being employed in this type of job/industry and the ease in transmission of disease with individuals employed in positions with direct food contact. The rise in Massachusetts hepatitis A virus cases appeared to be prevalent in the at-risk population. More than 50% of the confirmed cases in 2004 had one or more of the following characteristics: unemployed, co-infected with hepatitis B and/or C, recently incarcerated, homeless, intravenous drug user, or in detoxification programs.

There are important reasons that the food/restaurant industry must strive to prevent this disease and its potential spread. They include the perception that a restaurant or chain of restaurants may not be safe and the related economic impacts. In fact, in one of the more recent incidents involving hepatitis A in a restaurant worker, the industry reported a 50% decline in revenue over the following 2 week period.

Epidemiologic Investigation

The 351 local Boards of Health (BOH) in Massachusetts are charged with the responsibility of protecting the public from food borne illness through a sound public health food protection program. This is accomplished through licensure, inspection and enforcement of compliance of retail food and food service establishments. In preventing food borne illness and disease, the BOH should also verify that food managers and workers have received training and testing on proper food handling. When a case of food borne illness does occur in the community, the BOH serves as the principal investigator through inspection for facility cleanliness, proper food sanitation practices and adequate storage of food.

Food borne illness investigations involve the following steps:

- 1) Confirm the existence of an epidemic or outbreak
- 2) Confirm the diagnosis
- 3) Determine the number of cases (ill people)
- 4) Orient the data in terms of time, place, or person.

The epidemiological investigation of hepatitis A in Eastern Massachusetts conformed to these steps.

The Boards of Health in the involved communities worked closely with the MDPH Food Protection Program as the epidemic spread across several communities in Eastern Massachusetts. Local Boards responded to the initial reports of hepatitis A in their communities by conducting epidemiological investigations to determine the source of the outbreak.

The investigation began on April 19 when the Smithfield Board of Health was notified that a worker at "*Your Average Jack*" in Smithfield had hepatitis A with symptom onset in mid-March. On the basis of the date of symptom onset, the worker was considered to have been potentially infectious during a three-week period during the month.

On April 25, the restaurant's owners closed and cleaned the restaurant voluntarily. On April 27, an inspection by the local Board and MDPH found no sanitary code violations. None of the 20 food handlers at the restaurant had symptoms of hepatitis A (although none was tested serologically for evidence of recent infection). The restaurant reopened after 19 food handlers received Hep A immunization and one was excluded from work.

On May 20, MDPH was notified of six cases of hepatitis A among residents of Eastern County, which includes the town of Jonesville, all with illness onsets during May 8-15. By June 3, a total of 46 persons had been reported in Eastern County, with illness onsets during April 29 – May 26, compared with no cases during the same period in calendar year 2000. Of the patients who could recall where they had eaten 2-6 weeks before illness onset, 35 (76%) of 46 reported eating at "*Your Average Jack*," and 20 (43%) of 46 at a nearby "*Surley's*." Eating at other restaurants was reported less frequently.

Importantly, two of the 46 patients reported that they were employed as food handlers at "*Surley's*." Each had worked when they were potentially infectious and prepared foods that were not cooked after handling. On May 27, after interviewing food handlers at "*Surley's*", local health officials issued a public notice offering immunization to customers who ate uncooked or cold food prepared at "*Surley's*" during May 14-23. Approximately 1,600 persons responded to the public notice and were administered vaccine at a local hospital/clinic. The clinic was staffed by newly formed regional local health emergency response coalitions.

Investigators determined that the probable source of the hepatitis A outbreak was the original food handler at "*Your Average Jack*" who worked while infectious and contaminated food that was not cooked subsequently. Although the food handler with hepatitis A was the probable source, transmission from another food handler in "*Your Average Jack*" with

unidentified or unreported HAV infection could not be excluded. This outbreak investigation highlights difficulties faced by public health officials when making decisions relative to hepatitis A prevention. In this investigation, determining the risk for transmission to patrons from the infected food handler, who handled uncooked foods while potentially infectious, was based on an assessment of self-reported activities such as gastrointestinal symptoms, personal hygiene, and glove use. The factors that led to transmission despite reportedly good hygiene cannot be determined.

Response by Industry

Both “*Surley’s*” and “*Your Average Jack*” are popular restaurants in Massachusetts. Each has suffered perception and economic effects related to hepatitis A during the past several years. However, the response to such impacts has been very different.

“Surley’s”

“*Surley’s*” Restaurants, a classic American success story of two young brothers who open a neighborhood ice cream shop during the Depression, grow their initial business established in 1935 into a chain of over 500 restaurants, and 45 years later sell to a multinational company. Is “*Surley’s*” Restaurants a classic case of corporate profits taking precedent over food safety?

In the early 1990s, there were “*Surley’s*” Ice Cream shops in most cities and towns across Massachusetts, frequently more than one in the same community. With 351 separate local health departments in the state, “*Surley’s*” establishments were being inspected by a multitude of inspectors who conducted their inspections in isolation. However, as inspectors networked at regional and statewide meetings, they began to realize that they were having similar experiences with their inspections, similar concerns about food safety, and similar frustrations.

In general, the restaurants’ physical plant was poorly maintained, excessively dirty, and had a constant turnover of managers. Compliance was difficult to achieve. In conversations with managers, inspectors learned that repairs to equipment came out of the managers’ pocket (!) providing a disincentive to maintain and repair. In one community, the Health Department had closed the restaurant twice in two years – the second time because none of the refrigeration units were working properly except the walk-in freezer. They became more frustrated when “*Surley’s*” started wholesale redecorating of the public areas while spending no time or money on upgrading the food service areas.

Local health inspectors approached the MDPH to request assistance. It was clear that there were systemic problems with this company that was showing up as food safety concerns at the local level. It was not something that could be solved on an individual community basis – it needed to be addressed statewide. Although the state health department was not the inspector of the individual restaurants, the local health departments felt that MDPH was the most appropriate entity to bring the parties together. There was no precedent for this action in Massachusetts and

the state health department raised some concerns about singling out a particular chain. Local health officials persisted in their request and subsequently a meeting was convened.

The meeting was held at the MDPH State Laboratory Institute and included the Director of Food and Drugs, Food Protection Program staff, local health department directors, and the new Vice President of Operations for “*Surley’s*.” The meeting was moderated by the state’s Director of Food and Drugs; local health directors gave an overview of their concerns. “*Surley’s*” executives acknowledged there had been problems and noted that they had hired a consultant who had written a new manual on policies and procedures, the so-called “Red Book”. All managers would reportedly be trained with this book and their performance evaluations would include how well they complied with the state food code. Copies of all inspection reports were also promised to be forwarded to corporate headquarters.

Unfortunately, there was no follow-up to that meeting and “*Surley’s*” continues to be a public health concern. The menu at “*Surley’s*” has continued to expand and the food service areas remain unchanged. The company did close a number of restaurants, including the one that the local health department had ordered closed twice for violations of the food/sanitation code. This chain is still considered one of the more poorly operated chains by local health directors.

“Your Average Jack”

As mentioned previously, the toll of a hepatitis A outbreak in any community can not only have a devastating impact on any community health-wise, but also equally devastating impacts economically. While “*Surley’s*” restaurants continue to ignore the need for disease mitigation and prevention strategies, “*Your Average Jack*” decided to take a more creative and pro-active approach.

“*Your Average Jack*”, a local Massachusetts restaurant chain, has been in business since 1994. Initially starting out as one restaurant in southeast Massachusetts, the restaurant has grown to over 10 branches and is still growing. As noted earlier, in 2004, on the heels of the “*Surleys*” hepatitis A case, “*Your Average Jack*” branch in the same town also had a case of hepatitis A in a food handler. While the individual was isolated, the remaining staff was immunized with Immunoglobulin. For the management team of “*Your Average Jack*,” that was not enough. One of the owners had known all too well the serious impact of such an occurrence, his close friend having had to close his business after a similar situation in the town of Marshville some time before. Brainstorming with their management team, “*Your Average Jack*” sought a different approach.

This brainstorming session resulted in a major change in company policy. It was decided that every employee working for “*Your Average Jack*” food establishments, wait staff to cook, Chief Financial Officer to Manager, would be vaccinated with the hepatitis A vaccine. Realizing this might be a great financial risk to the company, given the turnover of restaurant employees, it seemed by far a greater risk to have another potentially devastating outbreak of hepatitis A.

In August 2004 a consultant in collaboration with the Human Resources department of “*Your Average Jack*” started to contact various companies to provide hepatitis A vaccinations to

all their staff. Hepatitis A vaccination consists of a series of two injections, at a minimum of six months apart. There were literally hundreds of individuals currently working in the ten restaurants. Not only would the first round of individuals need to be immunized but also new hires and a large series of boosters. After receiving excessively high estimates for immunization, the consultant approached local boards of health for assistance.

Hepatitis A vaccine cost for municipal health is about \$18.00 per injection. With a modest immunization fee, “*Your Average Jack*” was able to obtain from many boards of health a cost of \$25.00 per employee for the vaccination. Several boards of health in the areas outlying the communities where the restaurants were located agreed to partner with “*Your Average Jack*” to provide this service.

To date, “*Your Average Jack*” restaurants have immunized nearly 3,000 of its employees at a cost of \$75,000.00. This figure pales in contrast to the revenues lost historically due to reduced patronage after a hepatitis A outbreak among restaurant workers.

Opportunities for Policy Change

Enhancing Response Capacity

In 2003, the MDPH worked with local health officials statewide to establish 15 regional emergency preparedness and response coalitions across the state. The local/ regional response to the increased number of hepatitis A incidents in 2004 showed that the newly formed coalitions were a win-win for all involved. The regional/county style of government has a very weak footing in the old Yankee State – Massachusetts, and hence a learning curve has been experienced by all. The value of a united response, however, is that the end result exceeds the sum of its parts. This was clearly seen in one regional coalition's response to the individual communities where the events happened. Assistance was given directly to a community in all requested areas- additional personnel, supplies and expertise to meet the overwhelming task of addressing the problem.

The opportunity for policy change was also seen as a result of the very professional and timely response to the hepatitis A events. The municipal governments and the public saw a clear example of the social and economic benefits of local/ regional public health cooperation and that it could be expanded into other all hazard events and beyond. The powers to be at all local levels are now supporting the expansion of similar cooperative effort by working on mutual aid agreements and, memorandums of understanding similar to police and fire departments.

Education/Outreach

In addition to working collaboratively with industry representatives to enhance vaccinations, among employees, significant efforts aimed at education and outreach have also been expended. The MDPH Food Protection Program, in partnership with the Department’s Bureau of Communicable Disease Control has developed a series of resource materials for use at restaurants and food service establishments across the Commonwealth. Fact sheets on Hepatitis A Control and Prevention have been developed and in addition to distribution, have been posted

on the MDPH website as well as on some local sites. A very colorful poster emphasizing the importance of hand washing to prevent disease transmission was also produced and widely distributed.

The wide distribution was evident as the Massachusetts team boarded the first plane for attendance at the Mid-America Regional Public Health Leadership Institute. As we walked by the café just before the approaching the US Air gate, the large hand-washing poster was prominently displayed for both workers and the public to see and read.

Consequence Management

In order to help reduce the number of employees who, at the time of hiring, are infected with hepatitis A, education/outreach practices must include an element of consequence management. Prevention of hepatitis A is one of the main reasons restaurant employees are required to wash their hands after using the restroom, however for some individuals incentives may be important.

An important component of education and outreach must include consequence management. If a candidate for a job in the food industry (or an employee already hired) knows that immediate suspension without pay, until medically cleared is the consequence of being infected, it may provide an impetus for seeking immunization or coming forward. If this is the only income for the worker and /or their family it is likely that compliance will be greater.