

Why reliance on Big Box Stores should be curtailed during a Pandemic.

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Consider the following as an example:

- A big box store that has an approved pandemic capacity of 200 customers, and replenishment number (Customers in and out) of 35 customers every 15 minutes.
- This provides a turnover rate of 140 customers per hour.
- If it is projected that in the initial hour of operation the number of customers in the store will grow to capacity (200 customers) and in the final hour of business the number of customers will be depleted to 0 (total number of customers in the last hour 200).
- With operating hours from 9:00 AM to 8:30 PM, the store would be open for 11.5 hours. With a first hour of 200 customers, and a final hour of 200 customers, the remaining 9.5 hours at 140 customers per hour would allow for an additional (9.5×140 customers = 1330 customers), and a daily total of 1730 Customers.
- Now consider that possibly 10% of those customers were infected within a period of the precious 2 days, they are infectious carriers and they are likely to be without symptoms and they may not develop symptoms for another 3 days. That would be 161 infected spreaders. These spreader customers are completely free to roam the store; they are completely free to touch any number of products; even with masks, they are spreading inoculum on to clothes and packaging.
- A factor in contracting the disease is the level of exposure. In big box stores individuals spend a much greater length of time shopping for all their needs. Longer exposure to low levels of inoculum is more likely to result in infections;
- In this scenario any number of other susceptible customers may become infected. If the number of customers that become infected is as low as 5%, this scenario will result in 78 new infections.
- In a big box store scenario it is highly problematic to implement tracking. In fact, the big box store scenario is the embodiment of community spread.
- In the context of a small store it is possible to severely limit the number customers in the store; the length of time for possible exposure is limited; and, much as is done in restaurants in Ontario, it is possible to get names, phone numbers, dates and hours of shopping. In this scenario it becomes possible to implement a manageable tracking program.

With experience to date we are learning that a critical element in managing a pandemic is to have an effective tracking program. It appears that a big box store scenario is highly problematic and could be counter productive to implementing an effective tracking program.