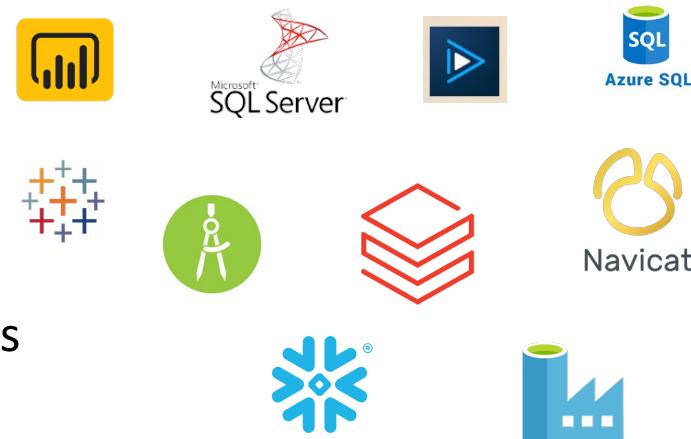


Food Inspections Assignment

A Data Analyst Journey

- Dealing with Food Establishment Inspections in two cities
 - [Chicago](#)
 - [Dallas](#)
- All the above cities are recording data on food inspections
 - Note that data differs in **content & schema**
- **Implementation:** Use tools of your choice 😊 (Make sure pick from the list of tools that we practiced in the course)



Food Establishment Inspections

- Deliverables
 - Part 1
 - Get data in a delimited format (**Bronze**)
 - TSV formatted data is [here](#)
 - Profile the data
 - Convert to Parquet (**Silver**)
 - Load data into Stage tables
 - Prefix stage tables as `stg_`
 - Part 2
 - Design Dimensional Model
 - Source to target mapping
 - Deploy the model to Datawarehouse (Target Database)
 - Part 3
 - Load dimensional model
 - Read stage table(s) and load the model
 - Name Dimensions and Facts with appropriate prefix such as `dim_ / fact_`
 - Part 4
 - Create BI dashboards
 - Power BI OR Tableau (Any one of the tools usage is fine)

Food Establishment Inspections

- Remember –
 - All good practices discussed in the class must be incorporated
 - Profiling and analysis to be clearly documented
 - Cleansing Steps and adjustments performed to be documented
 - Use Medallion architecture
 - Submit screen shots clearly showing the end results

What to show on Dashboard

Expected Visuals

- Examine food inspection results by:
 - Inspection result
 - Inspection type
 - Risk category
 - Facility type
 - Violations (Codes, descriptions)
 - Business inspected
 - DBA (Doing Business As), AKA (Also Know As), License
 - Location
- Inspection report
 - All of above with inspection #, license #, violations & inspector comments



There are over 15,000 food establishments across the City of Chicago that are subject to sanitation inspections by the Department of Public Health. Three dozen inspectors are responsible for checking these establishments, which means one inspector is responsible for nearly 470 food establishments. The Department of Public Health has systematically collected the results of nearly 100,000 sanitation inspections; meanwhile, other city departments have collected data on 311 complaints, business characteristics, and other information. With this information, the city's advanced analytics team and Department of Public Health teamed up to forecast food establishments that are most likely to have critical violations so that they may be inspected first. The result is that food establishments with critical violations are more likely to be discovered earlier by the Department of Public Health's inspectors.

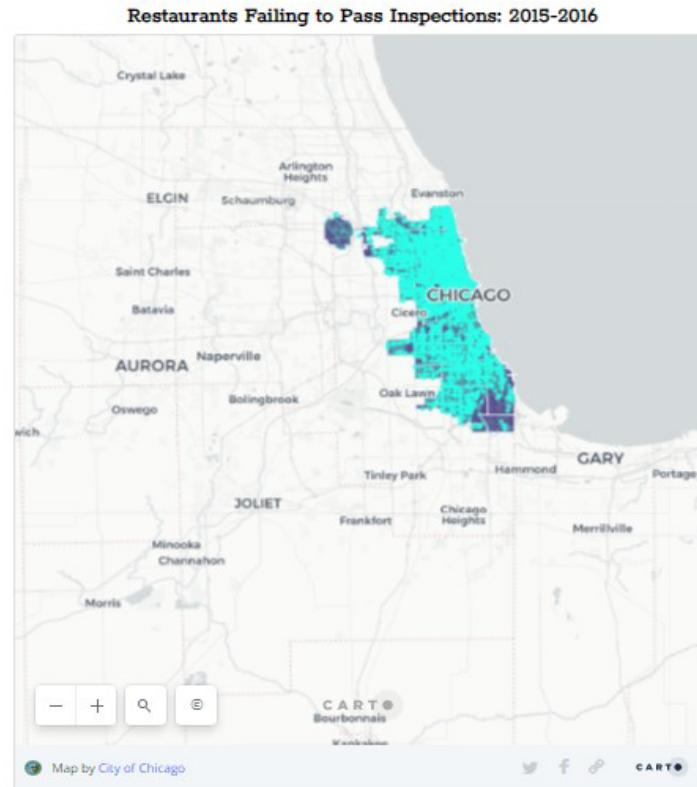
7 days
Improvements in number of days to discover restaurants with critical violations.
Food establishments with critical violations were discovered over one week earlier during a two-month evaluation.

Chicago Food Inspections

Open Data & Analytics

Collaboration was a key component of this project, with researchers at the Department of Innovation and Technology, Department of Public Health, Allstate Insurance Company, and Civic Consulting Alliance all working together. Each variable used in the model, with the exception of widely available weather and inspector data, was available on [Chicago's open data portal](#). The portal provides access to hundreds of datasets, which have been used to improve transparency, allow application development, and catalyze commercial activity for start-ups and large enterprises.

The portal was an effective tool to allow for such collaborative research. This project was able to leverage Chicago's key data assets: its large volume of data, the transparency and size of its open data portal, and its ability and willingness to conduct research to improve city services, introduce savings, and increase engagement with Chicago-area businesses.



Chicago Food Inspection DATA

- Data URL

- [City of Chicago | Data Portal](#) | [City of Chicago | Data Portal](#)
- [Food Inspections | City of Chicago | Data Portal](#)



CHICAGO DATA PORTAL Chicago Data Portal

Browse Tutorial Feedback | [Sign In](#)

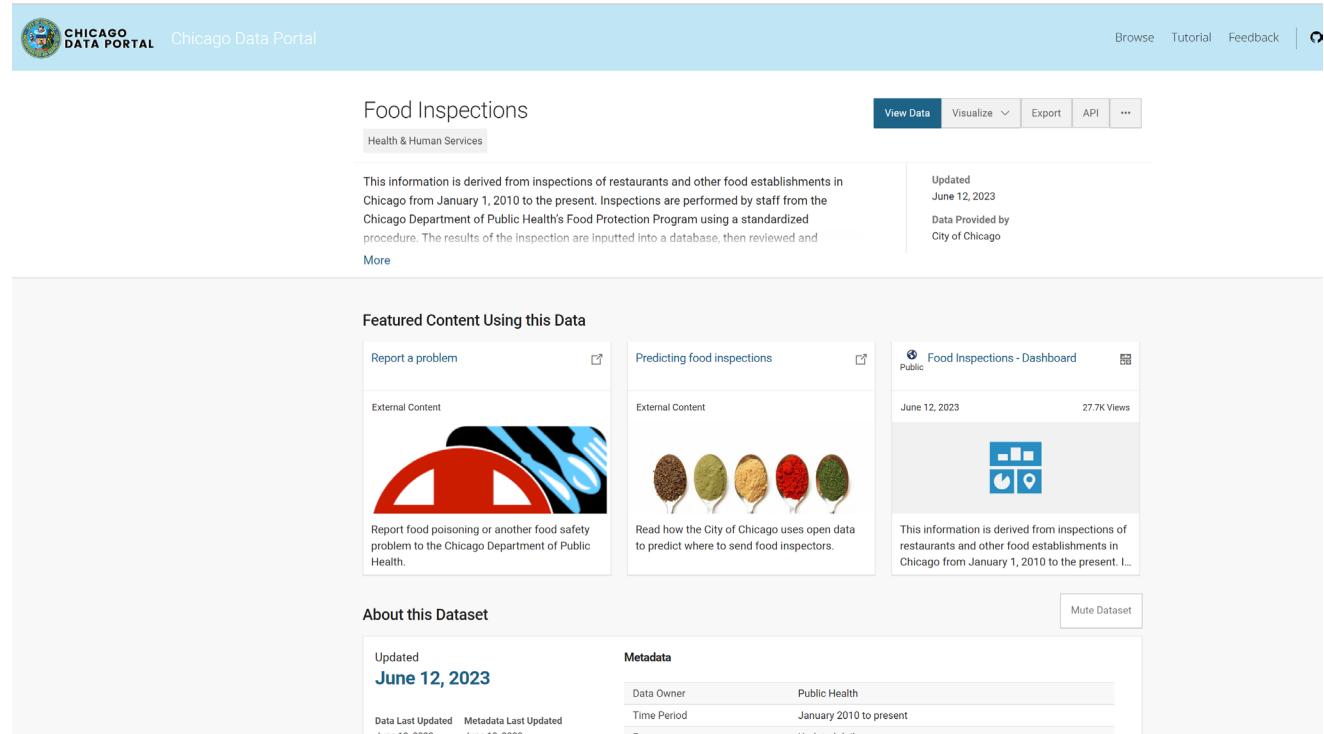
Welcome!

Where are TV shows and movies being filmed? How clean is my favorite restaurant? The City of Chicago's Open Data Portal provides information about your community. Browse and search for information about your neighborhood and the city. A bit confused? Take a look at a brief video about how to use the portal.

Search to find a specific dataset...

BROWSE THE DATA CATALOG BY THE FOLLOWING CATEGORIES

Administration & Finance	Buildings	Community	Education	Environment
Ethics	Events	FOIA	Facilities & Geo. Boundaries	Health & Human Services
Historic Preservation	Parks & Recreation	Public Safety	Sanitation	Service Requests
Transportation				



CHICAGO DATA PORTAL Chicago Data Portal

Browse Tutorial Feedback | [View Data](#) | [Visualize](#) | [Export](#) | [API](#) | [...](#)

Food Inspections

Health & Human Services

This information is derived from inspections of restaurants and other food establishments in Chicago from January 1, 2010 to the present. Inspections are performed by staff from the Chicago Department of Public Health's Food Protection Program using a standardized procedure. The results of the inspection are inputted into a database, then reviewed and More

Updated June 12, 2023
Data Provided by City of Chicago

Featured Content Using this Data

Report a problem	Predicting food inspections
External Content	External Content
 Report food poisoning or another food safety problem to the Chicago Department of Public Health.	 Read how the City of Chicago uses open data to predict where to send food inspectors.
June 12, 2023	27.7K Views
Food Inspections - Dashboard	

Food Inspections - Dashboard

Public

June 12, 2023 27.7K Views

This information is derived from inspections of restaurants and other food establishments in Chicago from January 1, 2010 to the present. I...

Mute Dataset

About this Dataset

Updated **June 12, 2023**

Metadata

Data Owner	Public Health
Time Period	January 2010 to present
Frequency	Updated daily

Data Last Updated June 12, 2023 Metadata Last Updated June 12, 2023

Chicago Food Inspection – Dashboard

- [Business Licenses | City of Chicago | Data Portal](#)



Business Licenses

Community & Economic Development

Business licenses issued by the Department of Business Affairs and Consumer Protection in the City of Chicago from 2002 to the present. This dataset contains a large number of records/rows of data and may not be viewed in full in Microsoft Excel. Therefore, when downloading the file, select CSV from the Export menu. Open the file in an ASCII text editor, such as Notepad or Wordpad, to view and search.

Data fields requiring description are detailed below.

APPLICATION TYPE: 'ISSUE' is the record associated with the initial license application. 'RENEW' is a subsequent renewal record. All renewal records are created with a term start date and term expiration date. 'C_LOC' is a change of location record. It means the business moved. 'C_CAPA' is a change of capacity record. Only a few license types may file this type of application. 'C_EXPA' only applies to businesses that have liquor licenses. It means the business location expanded. 'C_SBA' is a change of business activity record. It means that a new business activity was added or an existing business activity was marked as expired.

LICENSE STATUS: 'AAI' means the license was issued. 'AAC' means the license was cancelled during its term. 'REV' means the license was revoked. 'REA' means the license revocation has been appealed.

LICENSE STATUS CHANGE DATE: This date corresponds to the date a license was cancelled (AAC), revoked (REV) or appealed (REA).

Business License Owner information may be accessed at:
<https://data.cityofchicago.org/dataset/Business-Owners/ezma-pppn>. To identify the owner of a business, you will need the account number or legal name, which may be obtained from this Business Licenses dataset.

Data Owner: Business Affairs and Consumer Protection. Time Period: January 1, 2002 to present. Frequency: Data is updated daily.

Less

Chicago Food Inspection DATA

 Chicago Data Portal

Browse Tutorial Feedback |

Food Inspections

Health & Human Services

This information is derived from inspections of restaurants and other food establishments in Chicago from January 1, 2010 to the present. Inspections are performed by staff from the Chicago Department of Public Health's Food Protection Program using a standardized procedure. The results of the inspection are inputted into a database, then reviewed and [More](#)

Updated June 12, 2023
Data Provided by City of Chicago

[View Data](#) [Visualize](#) [Export](#) [API](#) [...](#)

Download Food Inspections X

Download Food Inspections for offline use in other applications.

[CSV](#) [CSV for Excel](#)

Additional Formats

[CSV for Excel \(Europe\)](#) [TSV for Excel](#)

[RDF](#) [XML](#)

[RSS](#)

Featured Content Using this Data

[Report a problem](#)

External Content



Report food poisoning or another food safety problem to the Chicago Department of Public Health.

[Predicting food inspections](#)

External Content



Read how the City of Chicago uses open data to predict where to send food inspectors.

 Food Inspections - Public

June 12, 2023 27.7K Views



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About this Dataset

Updated **June 12, 2023**

[Metadata](#)

Mute Dataset

Data Owner	Public Health
Time Period	January 2010 to present

Chicago Food Inspection – Dashboard

- [Business Licenses | City of Chicago | Data Portal](#)



I WANT TO ▾ PROGRAMS AND INITIATIVES ▾ GOVERNMENT ▾ ABOUT ▾

Public Health
Healthy Chicago

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Home / Departments / Public Health / Health Inspections / Services / Restaurant Inspection

Restaurant Inspection

Our Mission

The mission of the Chicago Department of Public Health's Food Protection Division is to educate food businesses, inspect food establishments, address food related emergencies, and otherwise act in the public interest. Through the inspection of food establishments and education of the food service manager, we are able to promote public health in the areas of food safety and sanitation to prevent the spread of food-borne disease.

In carrying out these responsibilities, members of the Food Protection Division conduct periodic inspections of food establishments in the city of Chicago. There are approximately 16,000 food establishments licensed in the city. These food establishments include:

- Restaurants
- Nursing homes kitchens
- Grocery stores
- Day cares, schools
- Convenience stores
- Seasonal facilities
- Bakeries
- Wholesale food establishments
- Hospital kitchens
- Temporary food events

The Food Protection Division gets its mandate from the [City of Chicago's Food Service Sanitation Municipal Code](#) and the [Rules and Regulations](#) promulgated by the Chicago Board of Health in support of its mission to provide food safety training for food service managers responsible for food safety, to perform inspections of food establishments to ensure adherence to the aforementioned regulations, and to provide service and education to the general public.



About Us

The Sanitarians - or Health Inspectors - are on call 24 hours a day to perform their duties when emergencies arise. The areas focused upon during a food safety inspection are:

- Health and disease control of food handlers
- Food source origination and wholesomeness
- Food-handling practices and proper temperature control
- Cleanliness of food handlers
- Hand-washing facilities
- Personal hygiene of employees

Each sanitarian also focuses on areas of sanitation pertaining to rodent control, facility maintenance, equipment adequacy and cleanliness, and sanitary maintenance. Additionally, the sanitarian responds to emergencies and investigations of food-borne outbreaks.

Our sanitarians are licensed in many areas of the Environmental Health field. Many hold state licenses such as Environmental Health Practitioners, Certified Pest Control Operators, Certified Food Service Managers and Instructors, and Swimming Pool Operators.

Sanitarians certified as Swimming Pool Operators inspect indoor and outdoor public pools in the city of Chicago, Swimming Pool Operators inspect approximately 290 indoor pools, and 95 spas within the city.

Chicago's sanitarians not only conduct close surveillance of swimming pools, spas and restaurants, but also of food handling throughout the entire food distribution system, from wholesale food processing plants to warehouse distribution centers.



Chicago Food Inspection DATA – Columns

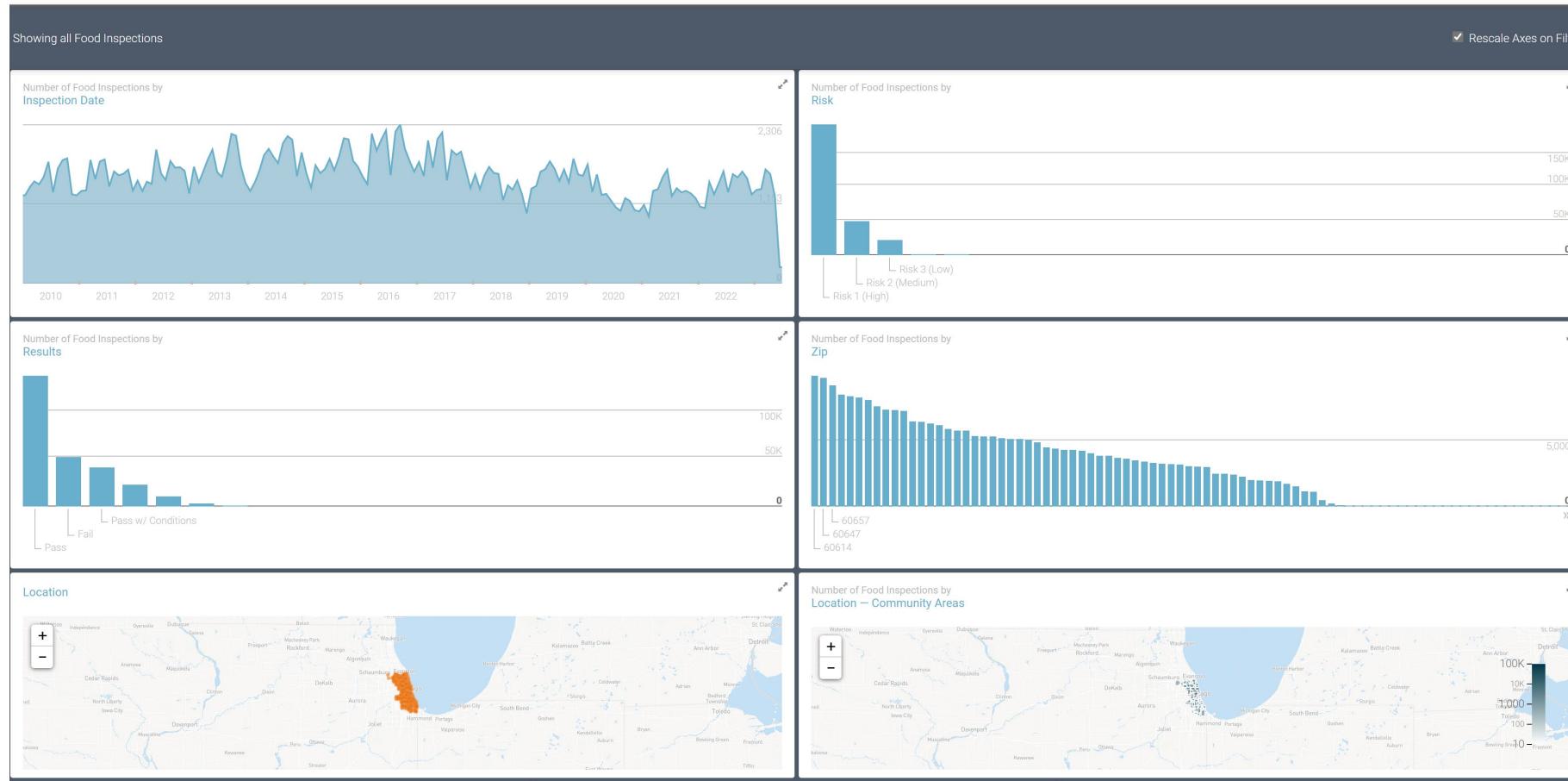
Columns in this Dataset

Column Name	Description	Type		
Inspection ID		Number	#	▼
DBA Name	Doing Business As	Plain Text	T	▼
AKA Name	Also Known As	Plain Text	T	▼
License #		Number	#	▼
Facility Type		Plain Text	T	▼
Risk		Plain Text	T	▼
Address		Plain Text	T	▼
City		Plain Text	T	▼
State		Plain Text	T	▼
Zip		Number	#	▼
Inspection Date		Date & Time	衄	▼
Inspection Type		Plain Text	T	▼
Results		Plain Text	T	▼

Violations	Plain Text	T	▼
Latitude	Number	#	▼
Longitude	Number	#	▼
Location	Location	衄	▼
Historical Wards 2003-2015	Number	#	▼
Zip Codes	Number	#	▼
Community Areas	Number	#	▼
Census Tracts	Number	#	▼
Wards	Number	#	▼
			Show Less

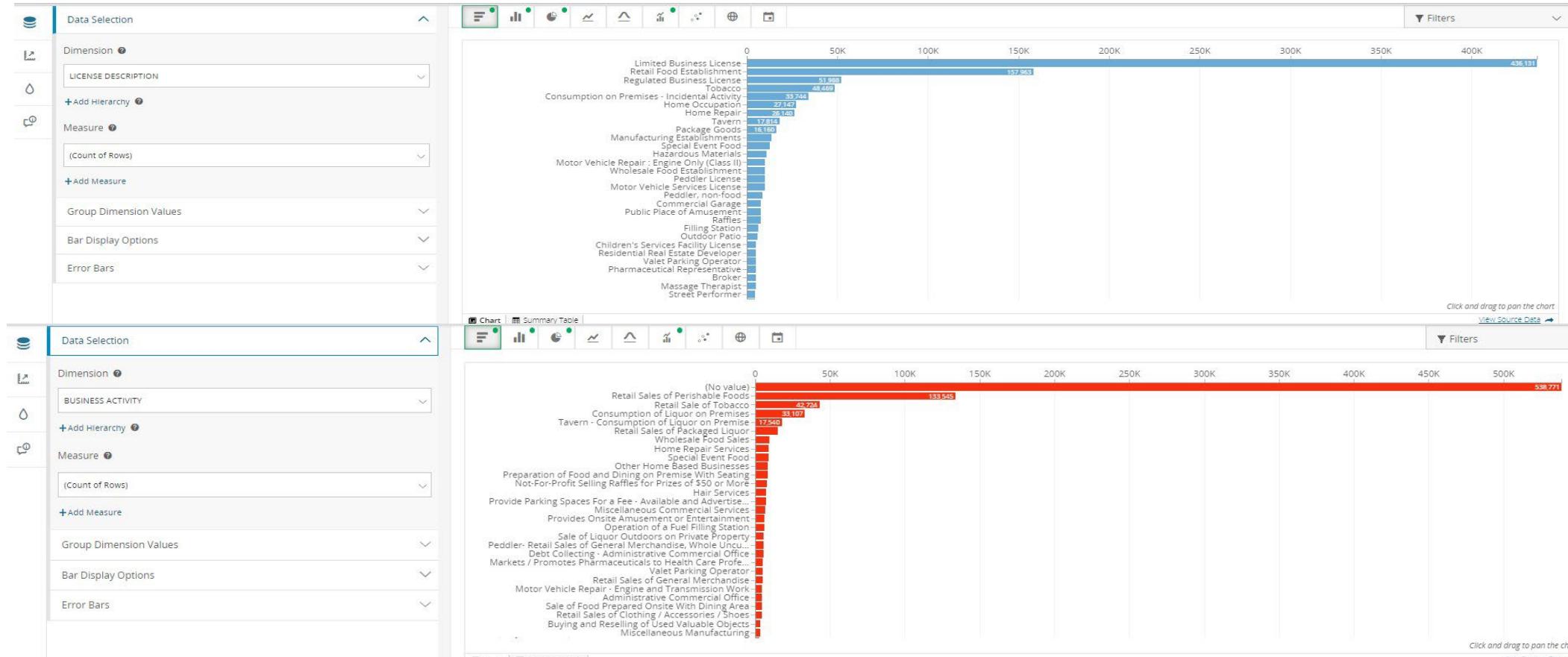
Chicago Food Inspection – sample Dashboard

- [Food Inspections - Dashboard | City of Chicago | Data Portal](#)



Chicago Food Inspection – sample Dashboard

- [Food Inspections - Dashboard | City of Chicago | Data Portal](#)



Chicago Food Inspection – Health Code Requirements

- [City of Chicago :: Understand Health Code Requirements for Food Establishments](#)

The screenshot shows the City of Chicago Public Health website. The header includes the Chicago logo, accessibility options, a search bar, and a translate button. The main navigation menu has links for I WANT TO, PROGRAMS AND INITIATIVES, GOVERNMENT, ABOUT, and TRANSLATE. Below the menu is a blue banner with 'Public Health' and 'Healthy Chicago'. The main content area is titled 'Understand Health Code Requirements for Food Establishments'. It includes sections on different types of health inspections (Business License Health Inspections, Routine Health Inspections, Complaint-Based Health Inspections), details about risk levels, and a sidebar with service facts and I Want To links.

Public Health
Healthy Chicago

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TRANSLATE ▾

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Home / Departments / Public Health / Health Inspections / Services / Understand Health Code Requirements for Food Establishments

Understand Health Code Requirements for Food Establishments

The Chicago Department of Public Health (CDPH) is committed to protecting the public's health by conducting science-based inspections of all food establishments. CDPH Sanitarians conduct inspections for new businesses, existing businesses and in response to a complaint.

There are Different Types of Health Inspections

Business License Health Inspections

New food establishments, or a transfer of ownership, that are applying for a business license must pass a health inspection by CDPH before the license will be issued. After an application for a license has been filed with the Department of Business Affairs and Consumer Protection, a health inspector from the CDPH will contact the applicant to arrange for an inspection. The applicant can schedule an appointment with the Health representative at the Department of Business Affairs and Consumer Protection at 312.744.5430, 312.74.GOBIZ (744.6249).

During the inspection, the health inspector will assess the types of food that will be prepared and the methods used for preparing and serving the food. This information will be used to assign a 'risk-level' – risk 1, 2 or 3 – to the food establishment. This risk level will be used to determine how frequent a food establishment needs to be inspected.

Routine Health Inspections

Once a food establishment is licensed and operating, a health inspector will periodically conduct unannounced inspections. The frequency of these inspections is based on the risk level assigned to the establishment.

In general, risk 1 establishments are inspected twice per year, risk 2 establishments once per year, and risk 3 establishments every other year. If problems are identified, the establishment may face fines or possible closure, depending on the severity of the problems.

Complaint-Based Health Inspections

CDPH receives around 4,000 complaints against food establishments each year. In response, CDPH health inspectors conduct unannounced inspections at the establishment.

Service Facts

Department:
Public Health
Health Inspections
People We Serve:
Businesses & Professionals
Food Service Establishments
Programs & Initiatives:
Health & Wellness

I Want To

Apply For +
Check Status Of +
Find / Get +
Pay For/Buy +
Register +
Report/File +
Request +
Sign up for/Volunteer +

Health Code Violations

During routine inspections, or in response to a complaint a health inspector may issue one or more citations to the food establishment. These citations are based on the following violations:

Priority Violations

This category includes such occurrences as:

- Inadequate storage temperatures
- Improper food handling practices
- Improper personal hygiene
- Rodent and/or insect infestation
- Lack of hot running water

Priority violations create an immediate health hazard that carry a high-risk of causing food-borne illness. Priority violations must be corrected immediately; if they cannot be corrected immediately, the license will be suspended, and the food establishment must close. Once the violations are corrected, the food establishment operator must sign an affidavit stating the violations have been corrected, and schedule a follow-up inspection. All violations must be corrected in order for the establishment to reopen.

Priority Foundation Violations

This category includes such occurrences as:

- No certified food manager
- No written employee health policy
- Food not properly protected from contamination during storage, preparation, display, service, or transportation
- Inadequate pest control

Priority Foundation violations create a potential health hazard if not corrected in the timeframe specified by the health inspector. If serious violations are identified, an unannounced follow-up inspection will be conducted by the health inspector at a later date.

Core Violations

Core violations include such occurrences as:

- Poorly constructed or maintained walls, ceilings or floors
- Improper storage of soiled and clean linens, coats, and aprons

Core violations do not pose an immediate threat to the public's health. A follow-up inspection is not performed if there are only Core violations. No citations are issued for Core violations.



Chicago Food Inspection

- Chicago Food protection services

- [City of Chicago :: Food Protection Services](#)



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Home / Departments / Public Health / Health Inspections / Services / Food Protection Services

Food Protection Services

Chicago is home to 16,000 food establishments like restaurants, grocery stores, bakeries, wholesalers, lunchrooms, mobile food vendors and more. Our business is food safety and sanitation with one goal, to prevent the spread of food-borne disease. We do this by inspecting food businesses, responding to complaints and food recalls.

Effective February 1, 2019, the City of Chicago implemented new requirements that all food service establishments must follow. These requirements are based on the latest science and conform to federal guidelines and to state and local laws.

- [2019 Food Advisory Disclosure and Reminder](#)
- [2019 Chicago Food Code Major Changes](#)
- [Customer Service Survey for Food Service Managers/Owners](#)
- [Employee Health Policy](#)
- [Food Code Rules](#)
- [Food Establishment Complaint](#)
- [Food Protection Program FAQ](#)
- [Food Service Sanitation Certificate and Summer Festival Certificate](#)
- [Food Service Sanitation City of Chicago Municipal Code Ordinance](#)
- [Healthy Kids Meal Information](#)
- [Juicing Requirements](#)
- [Labeling Summary for Packaged Food or Retail Sales](#)
- [Mobile Food Vendor](#)
- [Pushcart Food Vendor](#)
- [Register a Cottage Food Operation](#)
- [Restaurant and Food Service Inspection Reports](#)
- [Restaurant Inspection](#)
- [Summer Food Program / Child and Adult Care Food Program Guidelines](#)
- [Understand Health Code Requirements for Food Establishments](#)
- [Vomit and Diarrhea Cleaning Procedure](#)