HOUSTON HEALTH
DEPARTMENT

Houston Health Department

2023-2024 Weekly Influenza Report Syndromic Surveillance

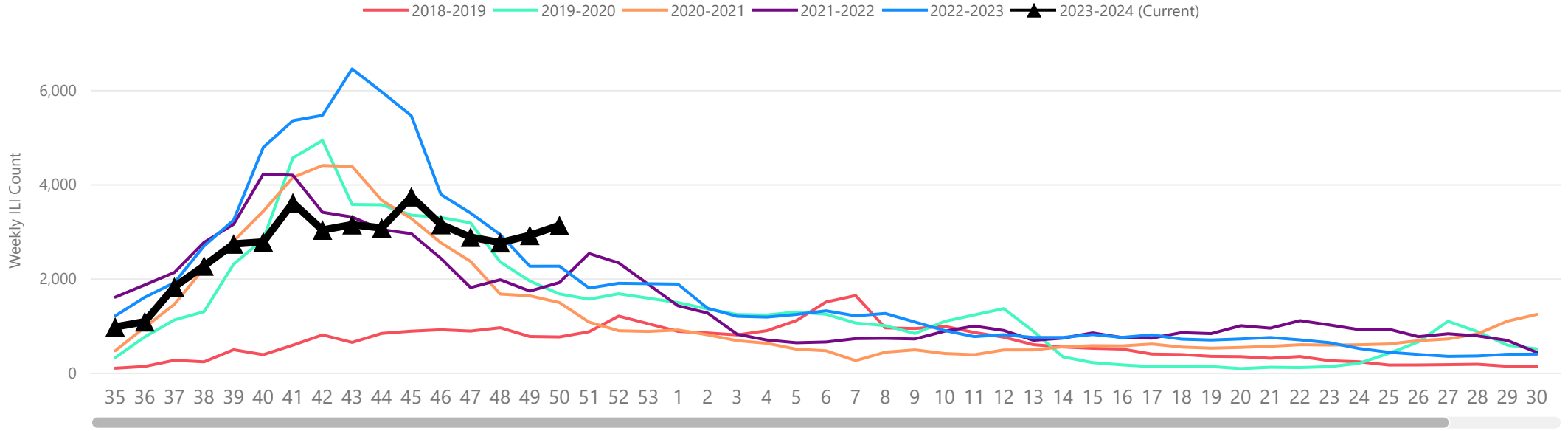*MMWR Week 2023 50 (ending 12/16/2023)*

Key Highlights:

Historically, the influenza season begins around the first of October, usually MMWR Week 40. Last season (2022-2023), HHD observed an uptick in influenza prior to Week 40. Because of this slight change in timeline from the traditional influenza season, all figures in this report currently begin on Week 35. There is a 7 day lag for state and national values reported. Last 5 weeks of syndromic data are subject to change.

Figures begin on page 3 of this report.

- ILI & Resp Syndrome Historical (COH), page 3: The **weekly ILI syndrome count is up from the previous week and overall trend has been on a slight upward trend for the past 3 weeks**, similar to the trend of the 2021-2022 season for the city of Houston. The weekly Resp syndrome count is up from last week, consistent with previous seasons for the timeframe.
- Respiratory Diagnoses Historical (COH), page 4: The **weekly flu diagnosis count is up from last week** and **has been trending upward the past 4 weeks**. The **weekly RSV diagnosis count is slightly down from previous week and trending downward for the past 6 weeks**. The **weekly COVID-19 diagnosis count is slightly up from the previous week and the trend remains steady/slightly upward**, similar to trends and counts seen in previous seasons for this timeframe.
- Current Respiratory Diagnoses with Wastewater data, page 5: the **weekly influenza diagnosis count and wastewater level have been increasing since 2023 Week 35 and both are up from the previous week. Both the RSV diagnosis count and wastewater level have been decreasing for the past 5 weeks.** The COVID-19 diagnosis count and wastewater level are low, however, both are up from the previous week.
- Current Flu Season with Texas and National trends, pages 6: Both national and Texas counts of positive influenza tests by clinical laboratories and ILINet % of visits for ILI are on increasing trends.
- Demographics of Flu Diagnoses for COH (past 5 weeks), page 7: a **majority of the current seasons flu diagnoses in the past 5 weeks** in COH are **children ages 5 to 17**, who also have the highest weekly ILI percentage of total visits. **Males and females** make up close to equal proportions of flu diagnoses with males having a slightly higher ILI percentage of total visits. **Hispanics followed by NH Blacks** make up a majority of flu diagnoses, and both these groups have the highest ILI percentage of total visits.
- Page 8 & 9 are the same figures shown in pages 3 and 4, except the display trends for the whole PH6/5S region, which currently mirror the trends of COH.

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ILI & Resp Syndrome during Flu Season: 2023-2024 and previous 5 years

Weekly ILI Syndrome Count

Legend: 2018-2019, 2019-2020, 2020-2021, 2021-2022, 2022-2023, 2023-2024 (Current)

Weekly Resp Syndrome Count

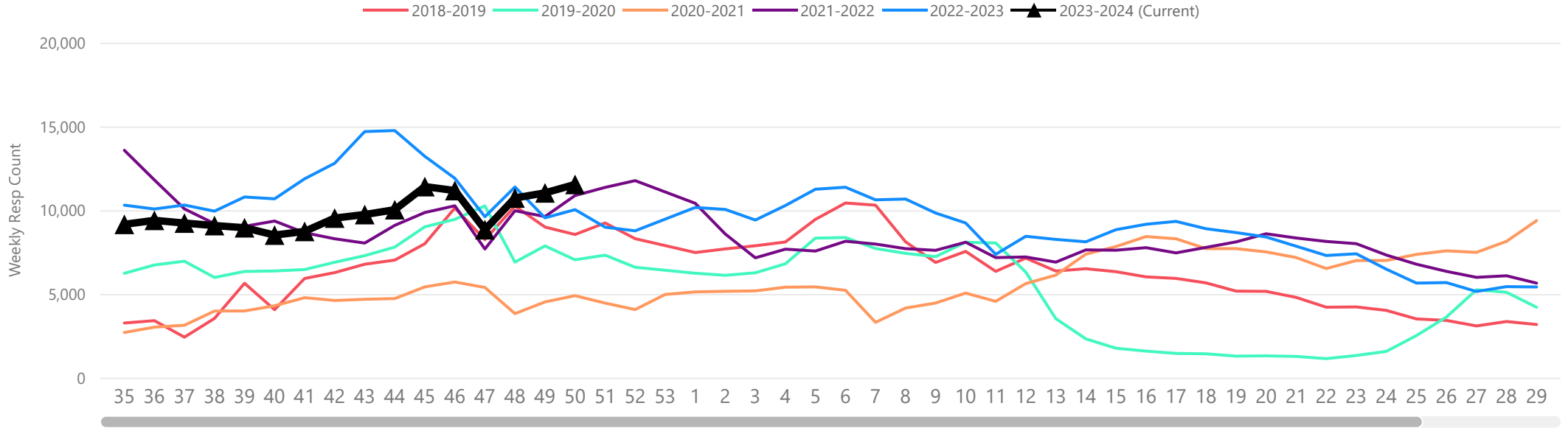Legend: 2018-2019, 2019-2020, 2020-2021, 2021-2022, 2022-2023, 2023-2024 (Current)

The syndromic surveillance system ESSENCE (Electric Surveillance System for the Early Notification of Community-based Epidemics) assigns incoming records to preset syndrome groups.

A syndrome group is a set of associated symptoms, conditions, and/or diagnoses. ESSENCE searches chief complaint and discharge diagnosis fields for keywords and ICD codes to determine if a record fits into one or more of the pre-defined syndrome groups.
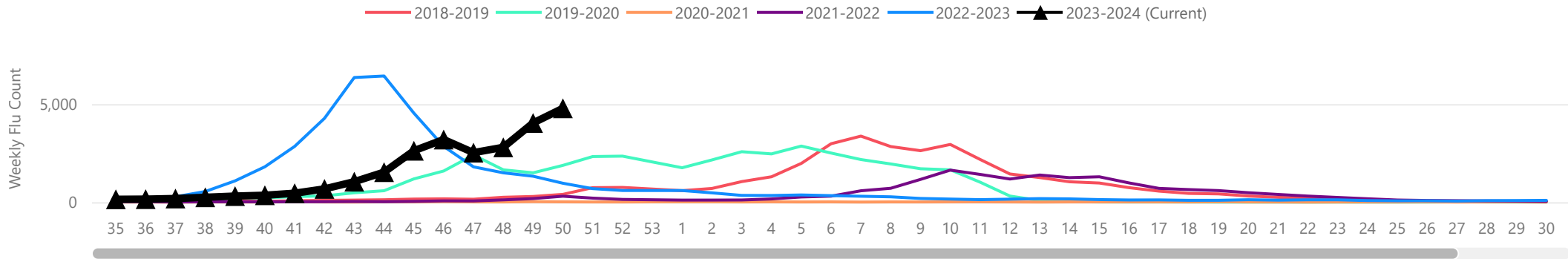
Figures to the left display counts of the ILI and Resp syndromes in ESSENCE.

The Influnza-like Illness (ILI) syndrome includes terms and their associated keywords such as "Flu", "Influenza", "H1N1", and for symptoms including "Fever" and "Cough" or "Sore Throat", while discounting non-ILI fevers (e.g., Rocky Mountain, Dengue).
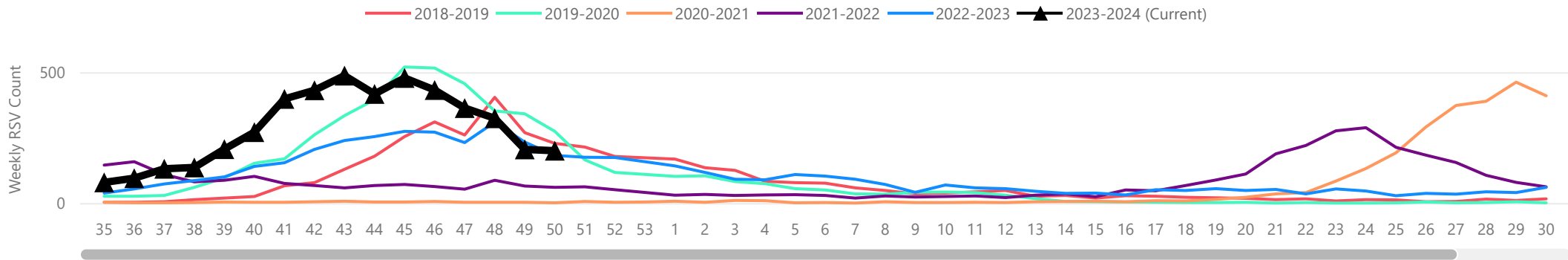
The Respiratory (Resp) syndrome includes terms and their associated keywords such as "Acute Bronchitis", "Chest Congestion", "Cough", "Shortness of Breath", "Acute Respiratory Distress".

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Respiratory Diagnosis during Flu Season: 2023-2024 and previous 5 years

Weekly Flu Diagnosis Count

Legend: 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 (Current)

Weekly RSV Diagnosis Count

Legend: 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 (Current)

Weekly COVID-19 Diagnosis Count

Legend: 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 (Current)

Select Region

| COH ZIP | PH6/5S |

The **discharge diagnosis field** in an ESSENCE record contains ICD codes given by the provider/facility.

Figures to the left display counts of the ICD10 codes found in the discharge diagnosis field for **influenza** (flu), **respiratory syncytial virus** (RSV), or **coronavirus disease 2019** (COVID).

2023-2024 Flu Season (Current) Respiratory Diagnosis Counts:
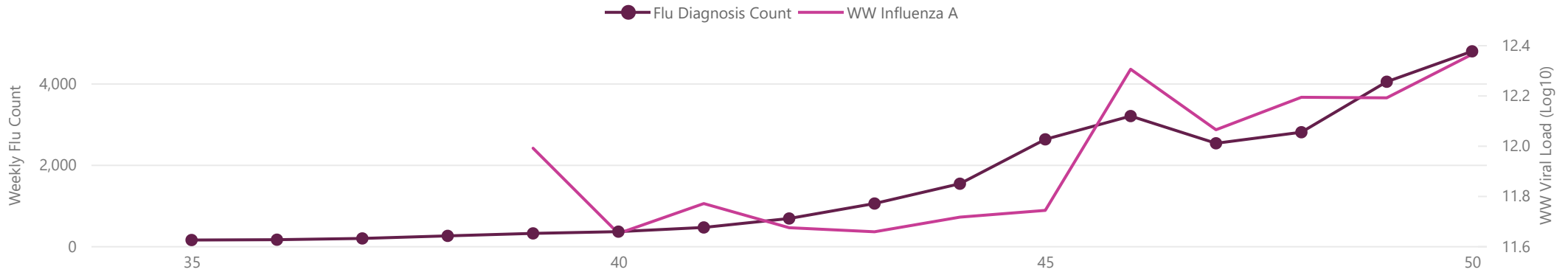
25,069
Flu Diagnoses

4,653
RSV Diagnoses

10,287
COVID-19 Diagnoses
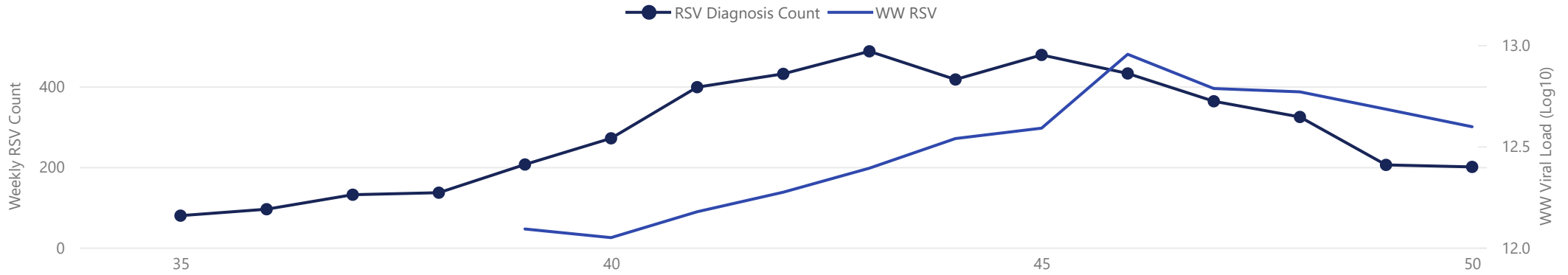
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Respiratory Diagnoses (Flu, RSV, COVID) Weekly Counts with Wastewater Trends for Current 2023-2024 Flu Season

COH Flu Diagnosis Count with WW Influenza A

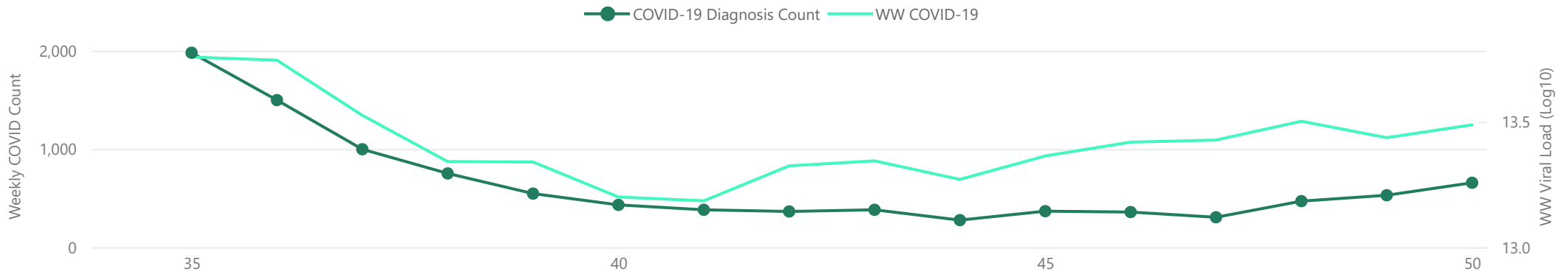— Flu Diagnosis Count — WW Influenza A

COVID-19 in wastewater (WW) is consistently tested on a weekly basis. Testing for Influenza A and RSV in wastewater resumed on a weekly basis on 9/25/2023 (MMWR Week 2023-39).

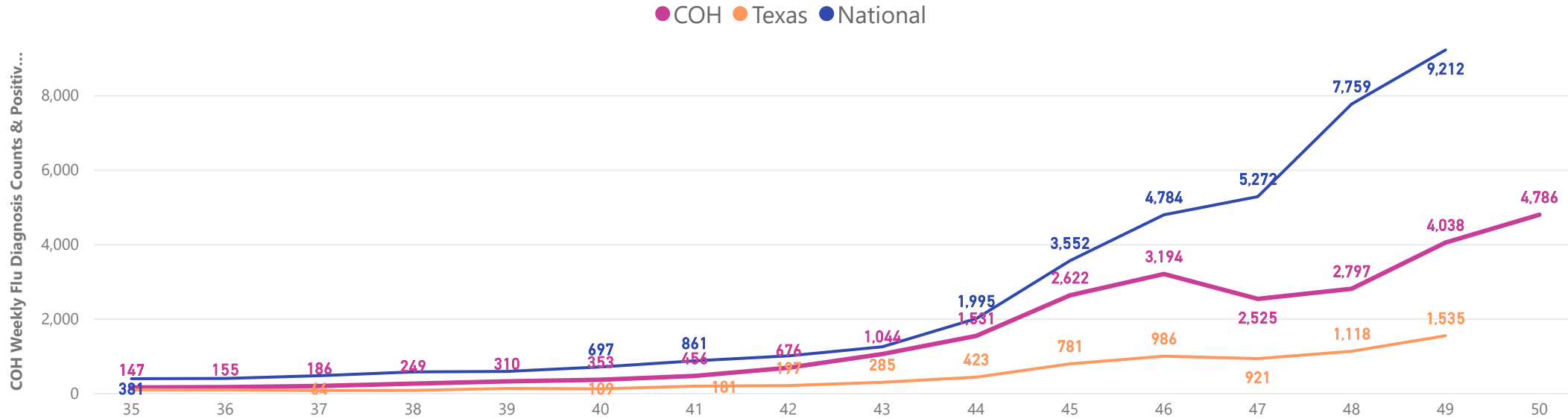## COH RSV Diagnosis Count with WW RSV

— RSV Diagnosis Count — WW RSV

COH COVID-19 Diagnosis Count with WW COVID-19

— COVID-19 Diagnosis Count — WW COVID-19
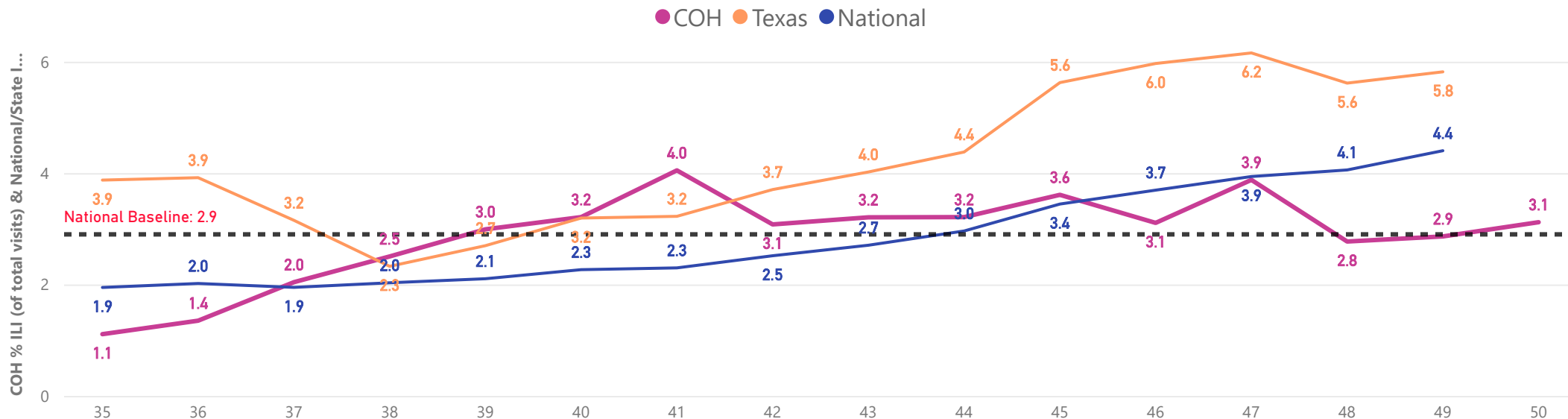

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COH Flu Diagnosis Weekly Counts & Percentage of Visits with National and Texas Flu Trends for Current 2023-2024 Flu Season

COH Flu Diagnosis Counts with Texas and National Positive Flu Tests

Note on top figure: this figure is for comparison of general trends only. National and Texas weekly values (influenza positive tests reported to CDC by clinical laboratories) are sourced from CDC's FluView and are displayed with weekly syndromic flu diagnosis counts for the COH 126 ZIP codes.

COH, Texas and National Percentage of Visits for ILI

Note on bottom figure: this figure is for comparison of general trends only. National and Texas weekly values (percentage of visits for ILI) are sourced ILINet via CDC's FluView and are displayed with weekly percent ILI (out of total visits) from ESSENCE for the COH 126 ZIP codes.
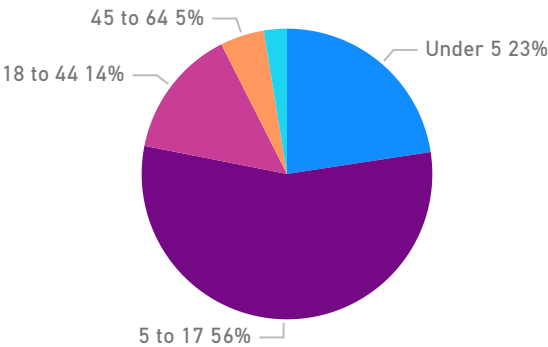
The dashed line on figure corresponds to the 2023-2024 national baseline value.

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Demographics of Flu Diagnoses for 2023-2024 Flu Season (Last 5 weeks, COH 126 ZIP Codes)

AGE GROUP: % Distribution for Current Season

- Under 5 23%
- 5 to 17 56%
- 18 to 44 14%
- 45 to 64 5%

AGE GROUP: % Distribution by Week

Age Group	2023-46	2023-47	2023-48	2023-49	2023-50
18 to 44	10%	16%	20%	14%	13%
5 to 17	63%	50%	43%	57%	59%
Under 5	22%	24%	26%	21%	21%

AGE GROUP: % Flu of Total Visits by Week

Age Group (in years):
- Under 5
- 5 to 17
- 18 to 44
- 45 to 64
- 65 & above

	2023-46	2023-47	2023-48	2023-49	2023-50
5 to 17	5.86%	5.68%	3.82%	6.84%	8.64%
Under 5	3.81%			3.83%	4.51%
18 to 44	2.84%	2.10%	3.10%	2.23%	2.40%
45 to 64	1.35%	1.14%	2.20%	1.83%	1.34%
65 & above		1.70%	1.45%	1.22%	2.11%

SEX: % Distribution for Current Season

- Female 51%
- Male 49%

SEX: % Distribution by Week

Sex	2023-46	2023-47	2023-48	2023-49	2023-50
Male	51%	48%	47%	50%	50%
Female	49%	52%	53%	50%	50%

SEX: % Flu of Total Visits by Week

Sex:
- Female
- Male

	2023-46	2023-47	2023-48	2023-49	2023-50
Male	3.64%	3.65%	3.02%	4.46%	5.40%
Female	2.81%	3.25%	2.69%	3.64%	4.35%

RACE-ETHNICITY: % Distribution for Current Season

- Hispanic 45%
- NH Black 27%
- NH White 20%
- NH Asian 4%

RACE-ETHNICITY: % Distribution by Week

	2023-46	2023-47	2023-48	2023-49	2023-50
NH White	20%	17%	19%	21%	23%
NH Black	30%	29%	28%	25%	26%
Hispanic	43%	46%	47%	46%	44%

RACE-ETHNICITY: % Flu of Total Visits by Week

Race Ethnicity Group:
- Hispanic
- NH Asian
- NH Black
- NH Other Race
- NH White

	2023-46	2023-47	2023-48	2023-49	2023-50
Hispanic	3.95%	4.04%	3.24%	5.01%	5.76%
NH Black	3.57%	4.04%	3.45%	4.15%	4.22%
NH Asian	2.90%	3.02%	2.46%	3.75%	3.61%
NH Other Race	2.57%	3.03%	2.51%	2.80%	3.62%
NH White	2.17%	2.16%	1.81%	3.15%	

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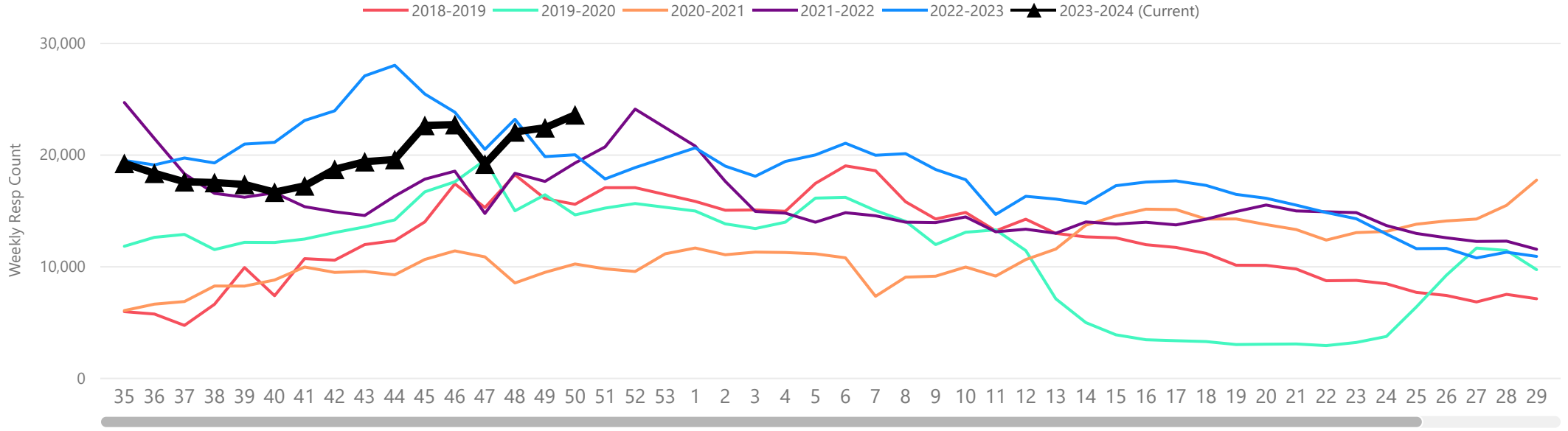

Select Region

COH ZIP | PH6/5S

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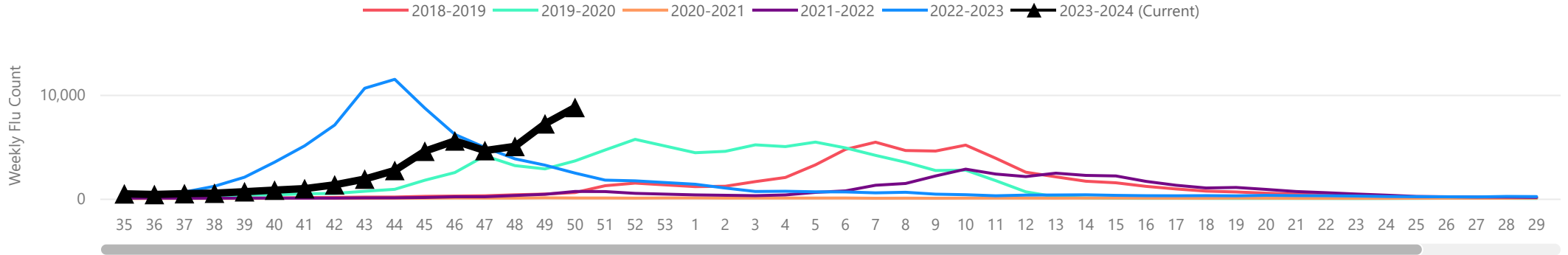
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Respiratory Diagnosis during Flu Season: 2023-2024 and previous 5 years