The Summer Allergy & Asthma Season Outlook

Weather Trends 360 CEO Bill Kirk

Speaker

Bill Kirk

- Weather Trends 360 CEO
- 17-time award winning technology firm specializing in YEAR-AHEAD weather and sales forecasting for Fortune 500 companies and small businesses worldwide
- USAF Gulf War Veteran, Captain
- Bible Scholar
Inspiration for YEAR-AHEAD Forecasting
(31 Years ago)

Year-Ahead Savvy Customers
(Weather & Sales Forecasting)

- 143 Fortune 5,000 clients
- 18 years supporting pharma and many diseases for IQVIA, Pollen.com, Bayer, J&J...
- Thousands of farmers and small businesses
- 18 Years in business
- 17 Technology awards – Forbes 5th Most Promising Company
- Clients in 195 countries
How we do it...a YEAR-AHEAD (Weather & Sales Forecasting)

- Traditional weather forecasting is physics-based that changes everyday. It struggles to get the week 2 forecast right.
- Weather Trends year-ahead forecast is more accurate than a week 2 forecast.
- It’s trillions upon trillions of statistical calculations to generate year-ahead worldwide forecasts.

Traditional Meteorology & Physics

- Meteorology 101 is Physics based, a moving target with ever changing forecasts.
- If there was just one drop (one storm) that would be easy Physics highly accurate forecasting.
- But there are millions of interactions in the atmosphere (surface and aloft) making this a very challenging way to predict long term weather.
- Not how we do it!
Weather Trends, Statistics & Climate Cycles
A better way to plan a year ahead

Trillions upon trillions of statistics and 24 climate cycle trends allow for much more accurate YEAR-AHEAD weather forecasting.

If you can get the weather right, week-by-week, a YEAR-AHEAD, then it's also possible to predict seasonal sales and weather ailments that complicate human suffering, everywhere on Earth!

PhD Academics at the University of Miami, West Point Military Academy, Penn State and others validated the approach is the best way to make very long lead forecasts that don’t change once issued for PROACTIVE vs REACTIVE planning.

The Power of 1° Degree®
May 2021 will be a big sales & suffering month!

Every 1°F warmer in Spring brings a 1% to 3% increase in allergy medication sales and 1% increase in Asthma patient visits to the doctor. Colder-Wetter Springs lower sales and suffering.

March 2020 was 3rd warmest in 125 years and sales and suffering soared to near historic highs as COVID was just making headline news.

Very unfavorable May weather last year (cold & snowy) suppressed sales but also curtailed Allergy and Asthma suffering.

May 2021 will bring the biggest year-over-year change in decades with much warmer and drier weather right at the traditional peak for suffering.

9°F warmer during the peak Asthma & Allergy season with dry weather will result in a +9% to +27% increase in Allergy & Asthma medication sales.
Asthma & Allergy Medications
Dry weather anytime means more prescriptions and suffering

For 19 years, Weather Trends has been predicting year-ahead allergy sales and suffering for large retailers and manufacturers. The correlation between Allergy prescriptions filled and Asthma prescriptions is 94.8%, with both responding to warmer/drier weather in Spring and Fall.

Predictive Analytics
Based on Big Data
Dry weather anytime means more suffering

Weather Trends Power of 1 Degree® technology has analyzed IQVIA historical daily Asthma Index data by location, 3-Zip patient level data, EPA pollution by day, CDC Flu data, Allergy POS by week and Weather to develop short range and year-ahead Asthma & Allergy suffering models.

- Warm/Dry Spring more pollen, pollution in the air results in higher Asthma suffering
- Cool/Dry Summer slight increase in Asthma suffering
- Warm/Dry Fall Ragweed pollen & pollution result in higher Asthma suffering
- Cold/Dry Winter more pollution, lower humidity results in higher Asthma suffering
63% of U.S. Dry Soil as of 30 March 2021

Most in 8 Years!

- Wet weather and wet soil conditions help to suppress pollen and pollutants and minimize dust from agricultural planting. 2019 record low.
- 2021 is already showing the highest dry to drought conditions in 8 years due in part to several climate cycles (La Nina, -PDO, +AMO, Solar Minimum) teaming up together, a 100 year event.
- Expect these drier trends to expand into the Central and Midwest regions through the Summer.

Top 25 Allergy Capital’s – Severe Spring
April and May Spring Peak Season

- An assessment of the Top 25 “Allergy Capitals” shows many will indeed have a severe allergy and asthma peak Spring season (April-May).
- 2020 Coldest April-May in 35+ Years. 2019 was the coldest in 9 years and wettest in over 35 years, weather suppressed suffering other than March 2020.
- 2021 will be polar opposite with a dramatic increase in suffering more similar to 2018, 2007 or 1987!
**Flu & COVID Trends – Late March**

*Flu at historic lows*

- This time last year we were battling both a 3rd near record spike in Flu and the first peak of COVID.
- This year Flu is at historic lows and COVID hospitalizations nearing pandemic lows similar to Fall last year.
- With more of us eager to venture outdoors, with a much more intense allergy and pollen season, more allergy and asthma suffering is likely.

---

**Peak Allergy & Asthma Week 1986-2021**

*Middle May peak = biggest change in decades!*

- Last year (2020) coldest in over 35 years and snowy weather in May suppressed pollen, and COVID shutdowns reduced pollution to decade lows. This dramatically reduced allergy and asthma suffering and medication sales.
- 2019 was the coldest in 9 years but wettest in over 35 years, again suppressing suffering.
- 2021 will be polar opposite with a dramatic increase in suffering more similar to 2018, 2007 or 1987!
U.S. Regional High Risk Periods
High Suffering Weeks (April – September 2021)

Favorable Periods for High Allergy & Asthma Suffering

- Spring peak suffering periods (red shaded weeks) with warmer and drier weather will be middle March (start), middle April and especially middle May for a severe peak week! (tree pollen March-April, grass May-June, weeds July – September)
- The late Summer ragweed season doesn’t appear as bad as last year with a start in early August and peak week 5-11 September with warmer/drier weather.

U.S. Weekly Weather Trends
Drier Year Round = More Suffering

- Spring (March-May) Warmest in 4 Years and Driest in 9 Years will result in high allergy and asthma suffering with a much longer season than last year.
- Summer (June-August) is a bit cooler and slightly wetter than last year.
  - June warmest in 3 years, driest in 5 years = bad grass allergies during the peak season.
  - July coolest in 6 years, similarly wet = diminished suffering
  - August coolest in 4 years, driest in 6 years = increasing weeds
  - September warmer and wetter = quick end to weed season
  - October warmest in 4 years, driest in 7 = high pollution

Greatest increase in year-over-year Allergy & Asthma suffering.
2021 Season (April – September)
Allergy & Asthma Suffering
Temperature & Precipitation Trends vs Last Year

Higher suffering areas likely in the Eastern half of the U.S. Most of Canada, Southwest Russia, India and China.

U.S. 2021 Hurricane Season Outlook
3rd Most Active in 165 Years!

- Last Year was the most active season in 165 years of records with 30 named storms and Louisiana taking the brunt of the season with 5 landfalling systems including Major Hurricane Laura.
- This year at least 23 named storms with Florida the unfortunate target this year.
- You and your medications need to be ready to evacuate.
Year-Ahead Accuracy
Better than a week 2 (day 7-14) short range forecast

Year-ahead temperature, rainfall and snowfall forecasts by mile everywhere on Earth.
Audited validation more accurate than week 2 short range forecasts.
Outperform NOAA’s month ahead forecast 83% of the time over the past 11 years.

Business Solutions for the Medical Industry
weather and sales forecast everywhere on Earth

Weather and sales forecasts by mile, by week A YEAR-AHEAD everywhere on Earth.
Power of 1° Degree Predictive Analytics based on your drug/sales data, emergency room visits, any metric. Understand what weather is influencing your business.
Short range tactical planning tools out 14 days.
Data feeds to for your existing planning and forecasting systems.
Proactive not Reactive planning.
Year-Ahead Hot Spot Outlooks for AAN
Atlanta, Georgia Example

- Weather Trends year-ahead forecasts cover every zip code in the U.S., every mile on Earth. We can help communities anywhere reduce suffering for 60 million people in the U.S. with proactive YEAR-AHEAD weather, sales and disease forecasting.
- Simple report identifies weather driven peak periods for Asthma, Allergy, Pollution and Flu conditions.
- Proactive, not reactive planning to hopefully save lives and reduce suffering.

Free Tools to Anticipate Suffering Ahead
wt360 30-Day Trend Chart Forecasts

- These trend chart rolling 30-day forecasts are freely available every mile on Earth. They can help you anticipate when you’re more likely to experience suffering.
- Warm/dry weather is a big trigger for higher suffering – look out Southeast in early April going from 30F to 83F with a drier pattern setting up.
- https://www.weathertrends360.com/Charts/Consumer
Free Tools to Anticipate Suffering Ahead
14-Day Short Range Asthma Suffering Index

- We combined our research and validated it with Montclair State University modeling to prove that weather is one of the biggest contributing factors to allergy and asthma suffering over other factors.

- Our prototype 14-day Asthma Index forecast incorporates this research into a simple worldwide outlook in hopes of helping Asthma sufferers better plan ahead.

- www.weathertrends360.com/Asthma

Coming Soon on The Allergy & Asthma Network!
6-Day Short Range Asthma, Allergy and Flu Suffering Index

Tuesday, March 16, 2021
41° Chantilly, VA | 41°/41° high/low | 30% chance of rain | SSE 9 mph winds

Asthma

Allergy

Flu

www.weathertrends360.com/Asthma
TIME FOR QUESTIONS

Record your questions in the question box
We’ll get to as many as we can!

Next Webinar

- The ABC’s of COVID-19 and School Reopening: Assessment, Beliefs and Care
  Wednesday, April 14th, 2021
  3:00 PM ET

Register at allergyasthmanetwork.org – News - Webinars
The Summer Allergy & Asthma Season Outlook

Allergyasthamanetwork.org