

***AGAINST ALL ODDS***  
**EPISODE 32 – “SUMMARY”**  
**TRANSCRIPT**

## FUNDER CREDITS

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## INTRO

### **Pardis Sabeti**

Hello, I'm Pardis Sabeti and this has been *Against All Odds*, where we hope we've made statistics count – and shown how it can be valuable in ways you might never have expected.

The subtitle of our series is *Inside Statistics* and that's where we've aimed to take you over the course of the past 31 video modules. By now you should have a pretty good sense of the many ways statistics can be a part of life, both on the job and off. We've looked at very specific examples to illustrate all these different statistical concepts....

From a club for tall people...

To your odds at the casino...

To a poem possibly written by the Bard himself.

But we hope that you've also realized that the stories we've focused on are just the tip of the iceberg for statistical applications. All kinds of businesses use statistics to keep track of sales and improve the bottom line. Tons of workplaces use statistics to monitor processes and improve quality and efficiency. Food service, retail, manufacturing, the service industry – all these sectors of the economy employ different statistical tools in their quest for success.

Health care practitioners utilize statistical techniques all the time to figure out what treatments for particular conditions are the best. Well-designed studies can examine outcomes from different treatments and much medical advice is based on these kinds of experiments. It's important for all of us as health-care consumers to understand the basis for the advice we receive, so we can discern what's sensible and what's quackery.

### **Domenic Reda**

It wouldn't make sense if the treatment was not effective to spend money on something that's not gonna work. In addition to that, if it turns out that it does have the potential to cause harm, people should be aware of that possibility.

### **Pardis Sabeti**

Government also relies on statistics to deliver quality constituent services in a cost effective and timely manner. Yes, Somerville, Massachusetts collected data on its residents' happiness levels, but the city's statistical work does a lot more than that.

### **Daniel Hadley**

We're very proud of the fact that even though we offer some of the best services around we spend the least per capita of any city in Massachusetts. What I think that tells us is that we're doing a good job of delivering services efficiently. There's so many things, you start digging into the data and realize, "Oh, we could probably spend a lot less on this service if we simply, you know, did X, Y or Z." So, there are lots of policies we've enacted because of the data that have allowed us to use the taxpayers' money more efficiently and just generally make the city a better place.

**Pardis Sabeti**

The federal government also deals in statistics, and not just the decennial census that counts up every U.S. resident.

**Mario Matthews**

A lot of the things you probably overlook on a regular basis—like the unemployment rate, the consumer price index, your health statistics, crime statistics, housing rates—the Census Bureau is actively working on those things every day, every week, of every month, all year 'round.

**Pardis Sabeti**

That kind of information helps government agencies figure out what's happening all across the country. They can then make decisions about where and how best to allocate funds and services.

Companies also dip into this kind of data for their marketing plans and business models. And understanding the fundamentals of how the Census Bureau collects and analyzes that data is important for you, too, as an informed citizen.

Just keeping up with the news demands a certain level of statistical literacy.

Statistics isn't just for business and government though – it provides a way to organize data, no matter where you encounter it. We can gain insights into the world around us when we apply statistical techniques to any observed data.

It's stats that helped us confirm the link between chemicals in the environment and failing peregrine falcon populations.

It's stats that allows spring water supply predictions based on winter snowpack.

And it's stats that helped quantify the deadly relationship between powerboats in the water and manatees.

These are very specific examples of how statistics can help us understand the natural world and our interactions with it. And sometimes seemingly small bore

questions – like the changing spring migration timing of a bird species – can have wider implications that statistics can help identify.

**Libby Ellwood**

As we expect the climate to continue to warm, these shifts in phenology, shifts in when life events in certain organisms happen, can alert us to what might happen in the future with continued climate change.

**Pardis Sabeti**

It's hard to get larger scale than global climate change!

So way back in our first video, we told you that statistics is important for everyone, not just top-level scientists and mathematicians. We hope as you move forward toward a career, whatever that may be, and spend time pondering life's mysteries big and small, you'll call on the statistics you've learned here to help you understand the world out there.

For *Against All Odds*, I'm Pardis Sabeti. Thanks for watching!

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DeWolfe Music Library

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