

# **How to Give A Dynamic Scientific Presentation**

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# Learning Objectives

- To learn the components of a scientific presentation/lecture
- To know how to convey your ideas
- To determine ways on how to avoid pitfalls in putting audiences to sleep
- To review appropriate format of a scientific lecture

# Outline

- Reasons/Opportunities to Present
- How to effectively communicate orally to your audience
- Components of a scientific lecture
- How to effectively communicate visually to your audience

# Why do we need to present?

- To Impart your Research Results
- To Report a Clinical Case
- To Share Interesting Cases
- To Give Scientific Lectures

# **The Oral Presentation**

# Components of the Effective Oral Presentation

1. What you say – “verbal”
2. How you say it with your voice – “vocal”
3. Everything the audience can see about you - “visual”

# Components of the Effective Oral Presentation

1. What you say – “verbal”
  - a. Get the message across
  - b. Make one statement that you want your audience to remember
  - c. Be selective – do not try to say everything you write; make conclusions

# Components of the Effective Oral Presentation

1. What you say – “verbal”
  - d. Make deliberate gestures, look at your audience
  - e. Avoid filler words such as: um, er, you know, ahh
  - f. When taking questions, do not be in a hurry: think before you answer



# Components of the Effective Oral Presentation

## 1. What you say – “verbal”

g. Keep your objective in mind

e.g., Uterine Atony

“To teach”: present a step-by step tutorial on prevention/management of uterine atony

“To encourage”: present advantages of administering prophylactic uterotonics

# Components of the Effective Oral Presentation

## 1. What you say – “verbal”

h. Know your audience

e.g., Uterine Atony

“LAY”: basic information, clarify misconceptions

“Paramedical Staff”: scientific information, clarify misconceptions, emphasize concrete conclusions

# Components of the Effective Oral Presentation

## 2. How do you say it

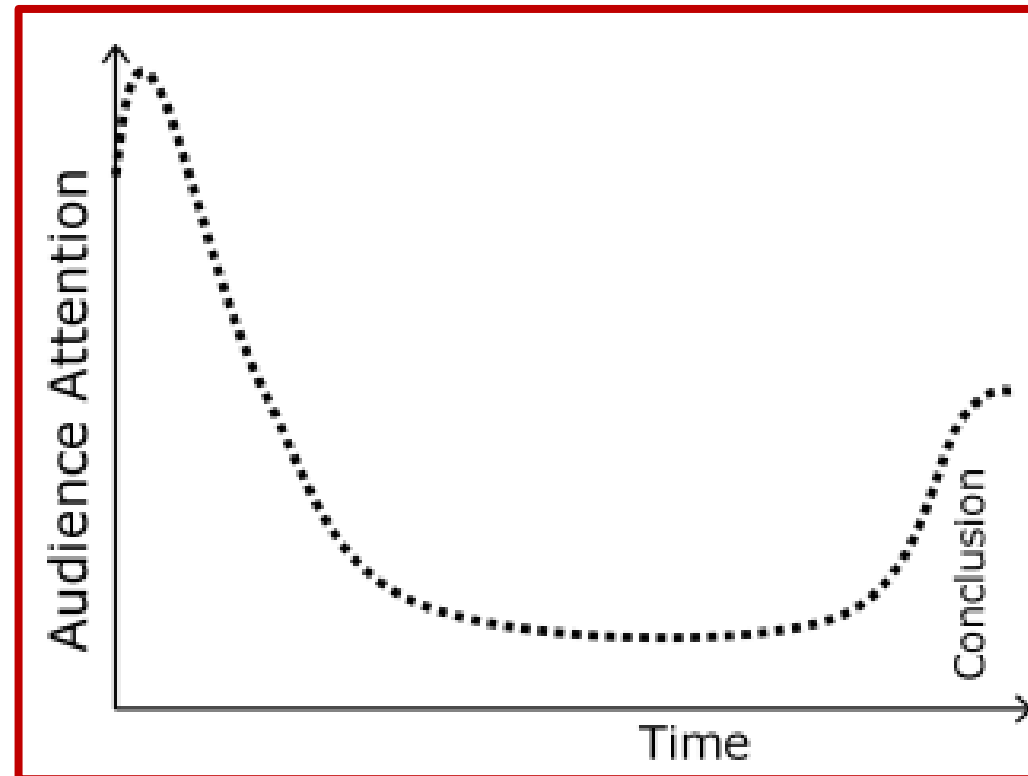
- a. Make your goals clear at the start of your presentation
- b. State your point/objective at the beginning and repeat or emphasize it at the end

# Components of the Effective Oral Presentation

## 2. How do you say it

### a. Make your goals clear at the start of your presentation

Attention Span



# Components of the Effective Oral Presentation

## 2. How do you say it

	<b>The 10-minute rule</b>	<b>Student attention high at the start the reaches a low point after 10-15 mins</b>	<b>May be too short</b>
Attention Span	The 10-20 minute rule (experiments on 20-minute vs. 50-minute lectures)	-Experiments showed attention rose rapidly during first 10-20minutes then slowly declined until 50 <sup>th</sup> minute of lecture -Attention span decline after the 20 <sup>th</sup> minute- slow decline	20 minutes of lecture may be enough? Beyond 50 minutes is too long?

# Components of the Effective Oral Presentation

2. How do you say it
  - a. The Pitch – natural: relax, natural pitch is pleasing and audible
  - b. The Tone – if you express empathy: soft tone  
- formal statement: formal tone
  - c. Volume – loud enough to be heard (not too loud that is irritating)
  - d. Speed/Tempo – slow enough to follow
  - e. The Pause - attach importance to timing; learning when to pause comes with regular practice

**BE CONFIDENT. PRACTICE!!!**

# Components of the Effective Oral Presentation

## 2. How do you say it

- f. Be Extemporaneous: neither read nor memorized – be able “to think on their feet”
  - with high level of spontaneity: natural, conversational
  - engage your audience
  - maintain eye contact

**BE CONFIDENT. PRACTICE!!!**

# **The Visual Presentation**



# Components of a Scientific Lecture

1. Title slide: title of the Lecture, your name, affiliations (summary), date, may place the venue
2. Disclosure of Interest: financial relationships, relationship with the industry; ***should relate to the substance of the research or subject being presented***
3. Learning Objectives: What is your purpose? Who is your audience?
  - a. Identify key ideas and details to create a concise, engaging presentation
  - b. Identify the steps in planning a comprehensive presentation

# Components of a Scientific Lecture

3. Learning Objectives: What is your purpose? Who is your audience?

Use action verbs to describe the behavior at the appropriate level

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To recognize, or To identify

To compare

To define

To describe

To explain

To relate

To specify

To distinguish

# Components of a Scientific Lecture

## 4. The Outline of your Lecture: to organize your ideas

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Main topics

Key Ideas or subtopics

Latest updates and diagnosis and management

Updated journals/research

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# Components of a Scientific Lecture

## 5. The Body of your Lecture: be concise

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Supporting ideas

Details of the scientific topic/research (objectives, methodology, results, discussion, conclusion)

Examples in logical manner

Conclusion: answers your objectives, sums up your points, conclusions from the study you are presenting

# What do you show?

Identify the data that can be presented visually

Research

- Title of presentation and authors
- Statement of the purpose or hypothesis
- A list of the essential steps in the methods
- Graphs, tables, and figures that show the major findings
- Clinical photographs or diagrams that illustrate key points or help explain content
- Summary of the conclusions

# **General Guidelines for Visual Presentations/Reports**

1. Include appropriate citations for important information per slide
2. Maximum of 7-8 lines/ bullets per slide
3. Use bullets/ numbered phrases NOT long statements
4. Retype all tables
5. Use clear and easy-to-read fonts
6. Check presentation with the TV/LCD projector prior to reporting
7. PowerPoint/keynote presentations should be checked by a senior teacher at least 2 days before the presentation

**Include Appropriate Citations for  
Important Information per Slide**

# How to Cite References

1. Provide the references verbally
2. Provide a reference list slide at the end of your presentation with corresponding in-text citations
3. Make a reference per slide
4. Combine ANY or ALL of these



# How to Cite References

1. You can cite references within the text of your presentation slide using the same American Psychological Association (APA) format for in-text citations (Author, Date) as in a written essay
2. Remember to cite sources for direct quotations, paraphrased materials, and sources of facts (such as market share data in the example slide)
3. Your Reference List must include the sources cited on your presentation slides

# Basic Format to Reference Journal Articles

The basics of a Reference List entry for a journal article:

Author or authors - The surname is followed by first initials

Year of publication of the article

Article title (in single inverted commas)

Journal title (in italics)

Volume of journal

Issue number of journal

Page range of article

Tran T. T. (2016). Hepatitis B in Pregnancy. *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*, 62 Suppl 4(Suppl 4), S314–S317. doi:10.1093/cid/ciw092

Tran TT. Hepatitis B in Pregnancy. *Clin Infect Dis*. 2016;62 Suppl 4(Suppl 4):S314–S317. doi:10.1093/cid/ciw092

## In Text

Risk for chronic infection after exposure varies from 90% in infants, to 50% in toddlers and young children, and 5% in adults (Edmunds WH, 1993)

Recent review of published literature from 1975 to 2011: active-passive immunoprophylaxis fails to prevent HBV transmission in 8%–30% of children born to highly viremic mothers (Pan CQ et al., 2012)

## Reference slide at the end of the presentation

### References

1. Edmunds WJ, Medly GF, Nokes DJ et al. The influence of age on the development of the hepatitis B carrier state. *Proc R Soc Biol Sci* 1993; 253:197–201.
2. Pan CQ, Duan ZP, Bhamidimarri KR et al. An algorithm for risk assessment and intervention of mother to child transmission of hepatitis B virus. *Clin J Gastroenterol Hepatol* 2012; 10:452–9.

**Maximum of 8 Lines/Bullets per  
Slide**

# Fosfomycin for ESBL UTI?

- Usual studied dose is 3 g every other day, for 3 doses
- Study by Pullukcu et al. (2007) against ESBL *E. coli* showed clinical cure rate of 94%
- Study by Senol et al. (2010) for ESBL *E. coli* showed **non-inferiority** to 14-day course of either meropenem or imipenem (not randomized though)

Senol S, Tasbakan M, Pullukcu H, Sipahi OR, Sipahi H, Yamazhan T, Arda B, Ulusoy S. Carbapenem versus fosfomycin tromethanol in the treatment of extended-spectrum beta-lactamase-producing Escherichia coli-related complicated lower urinary tract infection. J Chemother. 2010 Oct;22(5):355-7.

Pullukcu H, Tasbakan M, Sipahi OR, Yamazhan T, Aydemir S, Ulusoy S. Fosfomycin in the treatment of extended spectrum beta-lactamase-producing Escherichia coli-related lower urinary tract infections. Int J Antimicrob Agents. 2007 Jan;29(1):62-5.

**USE BULLETS/NUMBERED PHRASES NOT LONG STATEMENTS**

## Recurrent Vulvovaginal Candidiasis (RVVC)

- $\geq 4$  episodes/yr
- Occurs in 5% to 8% of premenopausal women
- 1<sup>st</sup> step: make sure the patient actually has candida infection
- Usually more difficult to manage

**RETYPE ALL TABLES**



<i>Characteristic at randomization</i>	<i>Early ECV (n = 116) (No. [%])</i>	<i>Delayed ECV (n = 116) (No. [%])</i>
Maternal age (y) (median, 5th, 95th centile)	30.1 (20.1, 38.8)	31.1 (20.1, 38.7)
Parity		
0	76 (65.5%)	76 (65.5%)
1-4	39 (33.6%)	39 (33.6%)
>4	1 (0.9%)	1 (0.9%)
Gestational age at randomization (wk)		
<34 wk 7 d	5 (4.3%)	5 (4.3%)
34 wk 0 d-36 wk 0 d	111 (95.7%)	110 (94.8%)
>36 wk 0 d	0	1 (0.9%)
Racial background		
Asian	13 (11.2%)	13 (11.2%)
African American	3 (2.6%)	3 (2.6%)
White (including East Indian and Hispanic)	98 (84.5%)	98 (84.5%)
Other	2 (1.7%)	2 (1.7%)
Maternal height (median, 5th, 95th centile)	163.8 (153.6, 176.6)	163.8 (153.6, 176.6)
Maternal weight at randomization (median, 5th, 95th centile)	72.0 (57.0, 90.0)	72.0 (57.0, 90.0)
Description of maternal abdomen		
Muscular	28 (24.1%)	28 (24.1%)
Unremarkable	70 (60.3%)	70 (60.3%)
Lax	18 (15.5%)	18 (15.5%)
Description of maternal abdominal obesity		
Fat	12 (10.3%)	12 (10.3%)
Unremarkable	78 (67.2%)	78 (67.2%)
Thin	26 (22.4%)	26 (22.4%)
Time from last ultrasound to randomization (d)		
≤4	102 (87.9%)	102 (87.9%)
>4	14 (12.1%)	14 (12.1%)
Missing		
Estimated fetal weight (median, 5th, 95th centile)	2950	2447 (1843, 3000)
Placental location		
Anterior	32 (27.6%)	32 (27.6%)
Posterior	46 (39.7%)	46 (39.7%)
Lateral	13 (11.2%)	13 (11.2%)
Fundal	22 (19.0%)	17 (14.7%)
Unknown	4 (3.5%)	8 (6.9%)
Amniotic fluid volume‡		
Depth of largest pocket (median, 5th, 95th centile) (cm)§	5.0 (3.3-7.3)	4.6 (3.0-8.0)
Amniotic fluid index (median, 5th, 95th centile) (cm)¶	13.0 (6.8-24.7)	12.4 (6.7-19.4)
Previous cesarean section	5 (4.3%)	9 (7.8%)
Previous term birth with breech presentation	3 (2.6%)	5 (4.3%)
Prenatal care providers¶		
Obstetrician	78 (67.2%)	79 (68.1%)
Family physician	39 (33.6%)	29 (25.0%)
Midwife	26 (22.4%)	35 (30.2%)

## Pathogens in Acute Uncomplicated UTI in Women

Pathogen	Number (n=235)	Percent (%)
<b><i>Escherechia coli</i></b>	179	76.2
<i>Klebsiella pneumoniae</i>	8	3.4
<i>Enterobacter aerogenes</i>	4	1.7
<i>Citrobacter</i>	3	1.3
<i>Proteus mirabilis</i>	3	1.3
<b><i>Staphylococcus saprophyticus</i></b>	21	8.9
<i>Staphylococcus aureus</i>	7	3.0
<i>Streptococcus agalactiae</i>	3	1.3
<i>Staphylococcus hominis</i>	2	0.9
<i>Enterococcus faecalis</i>	2	0.9
<i>Staphylococcus hemolyticus</i>	1	0.4
<i>Staphylococcus warneri</i>	1	0.4

## Pathogens in Acute Uncomplicated UTI in Women

Pathogen	Number (n=235)	Percent (%)
<b><i>Escherechia coli</i></b>	179	76.2
<i>Klebsiella pneumoniae</i>	8	3.4
<i>Enterobacter aerogenes</i>	4	1.7
<i>Citrobacter</i>	3	1.3
<i>Proteus mirabilis</i>	3	1.3
<b><i>Staphylococcus saprophyticus</i></b>	21	8.9

## Pathogens in Acute Uncomplicated UTI in Women

Pathogen	Number (n=235)	Percent (%)
<i>Staphylococcus aureus</i>	7	3.0
<i>Streptococcus agalactiae</i>	3	1.3
<i>Staphylococcus hominis</i>	2	0.9
<i>Enterococcus faecalis</i>	2	0.9
<i>Staphylococcus hemolyticus</i>	1	0.4
<i>Staphylococcus warneri</i>	1	0.4

**SHARP CONTRAST BETWEEN FONTS AND BACKGROUND**

# Contrasting Text

- Sharp contrast =

Easy to read

- Poor contrast =

Hard to read

# Background

Foreground

	Red	Orange	Yellow	Green	Blue	Violet	Black	White	Gray
Red		Poor	Good	Poor	Poor	Poor	Good	Good	Poor
Orange	Poor		Poor	Poor	Poor	Poor	Good	Poor	Poor
Yellow	Good	Good		Poor	Good	Poor	Good	Poor	Good
Green	Poor	Poor	Poor		Good	Poor	Good	Poor	Good
Blue	Poor	Poor	Good	Good		Poor	Poor	Good	Poor
Violet	Poor	Poor	Good	Poor	Poor		Good	Good	Poor
Black	Poor	Good	Good	Good	Poor	Good		Good	Poor
White	Good	Good	Good	Poor	Good	Good	Good		Good

# Fonts Sizes

## Size 18

1. Minimum font size: 18
2. Preferred: 24
3. Larger size: better
4. Practice less text on screen

## Size 24

1. Minimum font size: 18
2. Preferred: 24
3. Larger size: better
4. Practice less text on screen

## Size 28

1. Minimum font size: 18
2. Preferred: 24
3. Larger size: better
4. Practice less text on screen
5. Title font size: **40-44**



**USE CLEAR AND EASY-TO-READ FONTS**

# Fonts Types

Calibri – Carboprost vs. Oxytocin

Gill Sans - Carboprost vs. Oxytocin

Cambria - Carboprost vs. Oxytocin

Corbel - Carboprost vs. Oxytocin

Constantia - Carboprost vs. Oxytocin

# Fonts Types

Garamond – Carboprost vs. Oxytocin

Georgia - Carboprost vs. Oxytocin

Verdana - Carboprost vs. Oxytocin

**DO NOT USE “ALL CAPITAL LETTERS””**

## **CAPITAL LETTERS**

- **ALL CAPITAL LETTERS ARE THE EQUIVALENT OF SHOUTING!**
- **ALL CAPS ARE HARD TO READ**

# **CDC RECOMMENDED REGIMENS 2021 FOR UNCOMPLICATED VVC**

## ***INTRAVAGINAL AGENTS***

BUTOCONAZOLE 2% CREAM 5G X 3 DAYS

BUTOCONAZOLE 2% BIOADHESIVE 5G X 1 DAY

CLOTRIMAZOLE 1% CREAM 5G INTRAVAGINALLY X 7-14 DAYS

CLOTRIMAZOLE 2 % CREAM 5G INTRAVAGINALLY X 3 DAYS

MICONAZOLE 1200MG VAGINAL SUPPOSITORY AS SINGLE DOSE

# CDC RECOMMENDED REGIMENS 2021 FOR UNCOMPLICATED VVC

## *Intravaginal agents*

Butoconazole 2% cream 5g x 3 days

Butoconazole 2% bioadhesive 5g x 1 day

Clotrimazole 1% cream 5g intravaginally x 7-14 days

Clotrimazole 2 % cream 5g intravaginally x 3 days

Miconazole 1200mg vaginal suppository as single dose

**AVOID SCRIPT-TYPE FONTS**



*AR DEECEEDEE* YuGothicLight **Baskerville Old Face**

**ALGERIAN** *AR HERMANN*

*AR CARTER* **AR BERKLEY**

**WideLatin** *Vladimir Script*

*Monotype Corsiva* **Segoe Script**

**LIMIT USE OF ITALICS**

# **Italics**

- Use only for emphasis
- Can change into bold font the italicized words

# Clinical Case

*How do you advise this patient against having recurrent infection?*

- *Avoid vaginal deodorants, douches, harsh soaps, perfumed products and chlorinated swimming pools*
- *Maintain proper hygiene*
- *Avoid use of medications that are known risk factors like prolonged use of antibiotics and steroids*

# Clinical Case

***How do you advise this patient against having recurrent infection?***

- Avoid vaginal deodorants, douches, harsh soaps, perfumed products and chlorinated swimming pools
- Maintain proper hygiene
- Avoid use of medications that are known risk factors like prolonged use of antibiotics and steroids

**LIMIT ANIMATION**

# Clinical Case

***How do you advise this patient against having recurrent infection?***

- Avoid vaginal deodorants, douches, harsh soaps, perfumed products and chlorinated swimming pools
- Maintain proper hygiene
- Avoid use of medications that are known risk factors like prolonged use of antibiotics and steroids

**INSERTING PHOTOS**



# Use of Photos

- Source from a free website (Creative Commons License)
- Be conscious of authorship
- Always cite reference

- When using images in APA Style, the images should be formatted as figures
- Most images won't have legends, but they should all have captions
- Legend - explains symbols used in a figure
- Caption - an explanation of the figure that is placed directly below the figure
  - provides the title of the figure
  - should be brief but descriptive
  - provide additional information that may be needed to explain the image

# Atrophic Vaginitis



FIGURE 1. Atrophic vaginitis. Note loss of labial and vulvar fullness, pallor of urethral and vaginal epithelium, and decreased vaginal moisture.

Adapted from GLORIA A. BACHMANN, M.D., and NICOLE S. NEVADUNSKY. Diagnosis and treatment of atrophic vaginitis. *Am Fam Physician*. 2000 May 15;61(10):3090-3096.

# Legally Using Images in Presentation Slides

- Are the images protected by copyright?
- How can we avoid copyright concerns when using images?
  - Use public domain images
  - Create your own images
  - Use a stock photo agency
  - Use images with a Creative Commons License (CC)

# Legally Using Images in Presentation Slides

## Use images with a Creative Commons License (CC)

Tips for using images governed by CC licenses

1. You need to acknowledge the author of the image
2. Read the terms and conditions of the CC license to see what is permitted and what requires further permission
3. CC licenses are irrevocable, so you can use the image under the license as long as you need to

# **USE OF FIGURES**

# Use of Figures

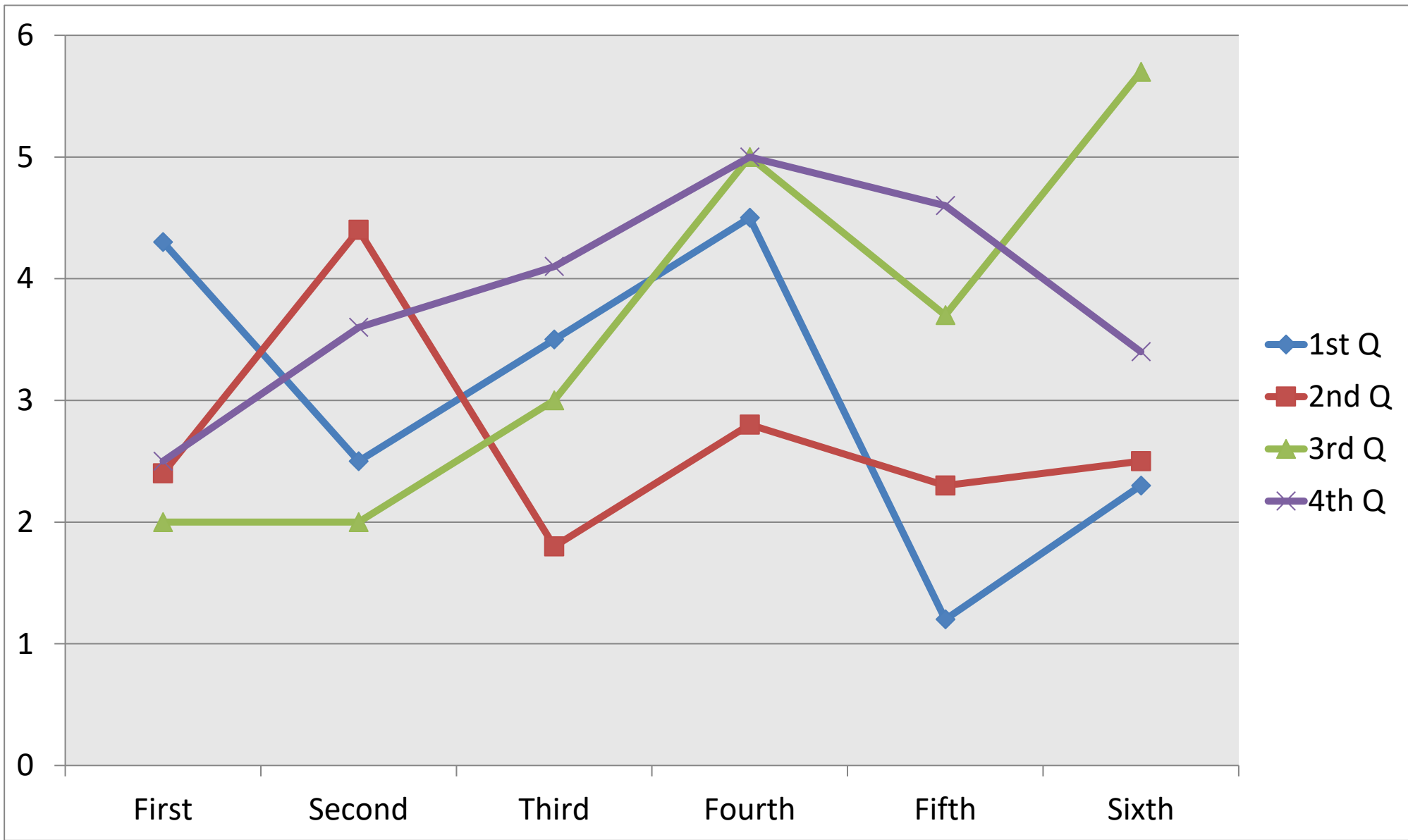
To quickly emphasize a relationship between data

To quickly state a process

- E.g., Graphs, Charts

Line graphs

- Show continuous change over time (e.g., birth rates)
- Limit to 4 lines per graph



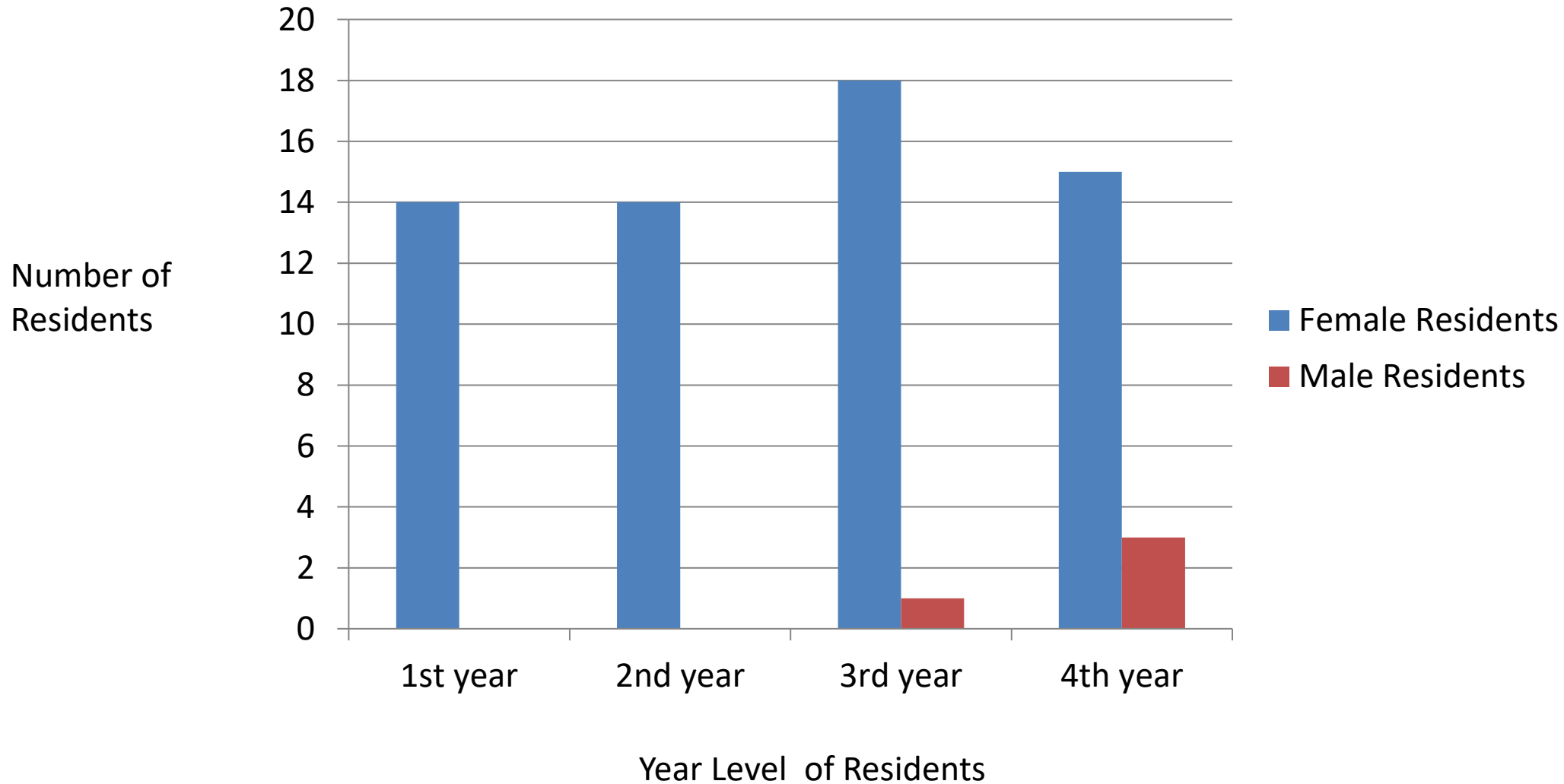


# Use of Figures

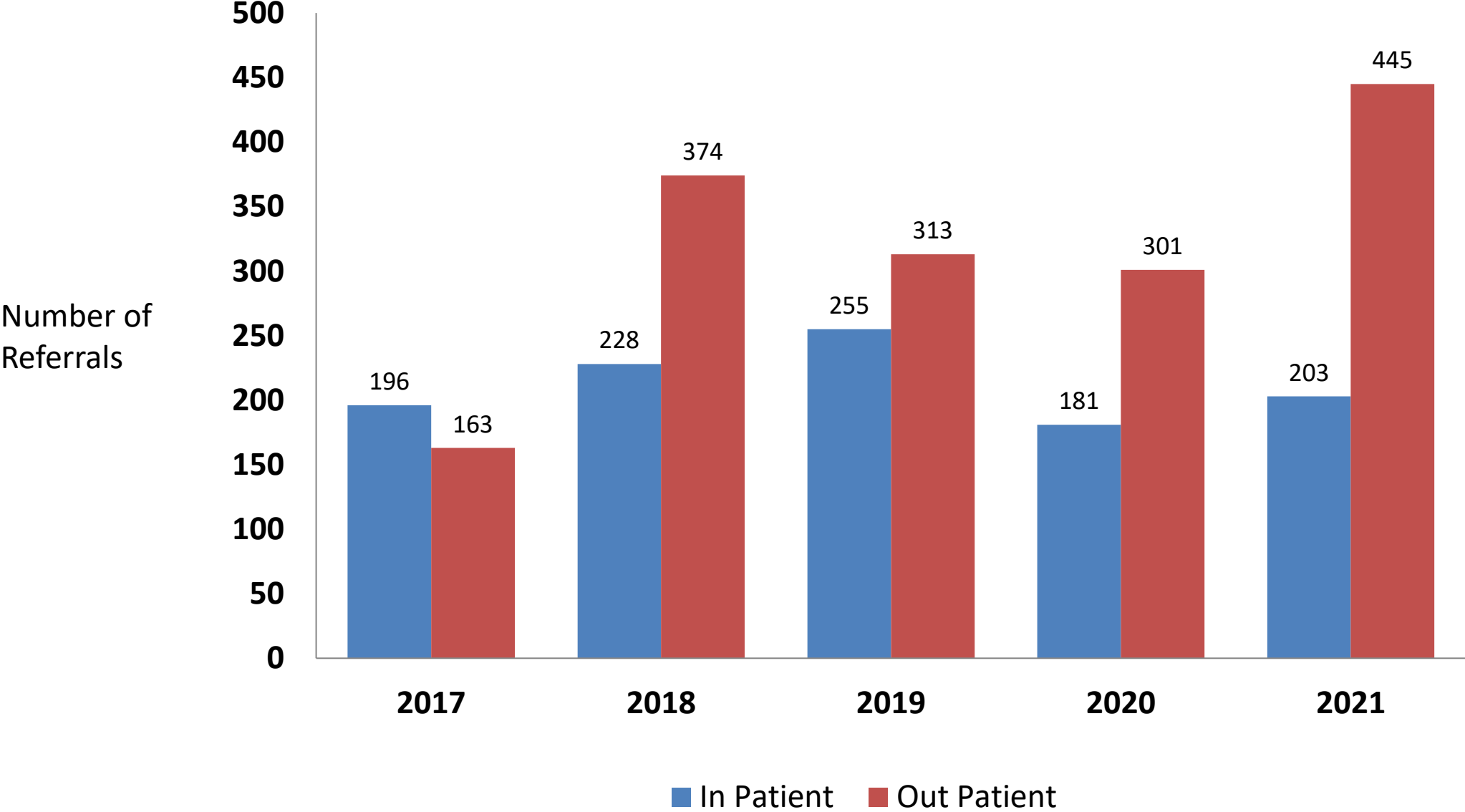
## Bar graphs

- Show change over time of discrete variables (e.g., item numbers, symptoms)
- Show multiple variables

# Distribution of Male and Female Residents in OB GYN Residency

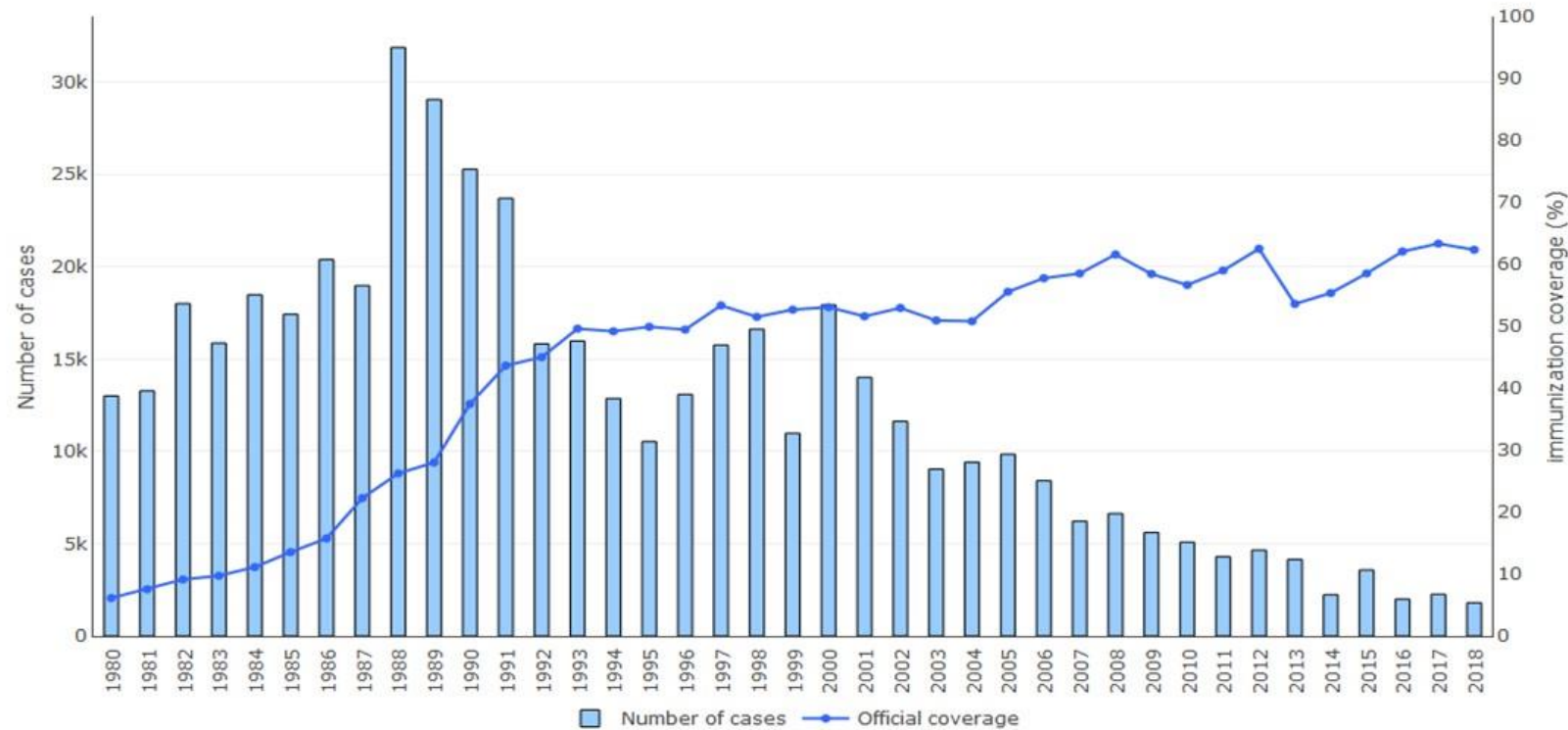


# TOTAL NUMBER OF REFERRALS (2017-2021)



# Maternal and Neonatal Tetanus

## Neonatal tetanus Global annual reported cases and TT2plus coverage 1980-2018



Maternal and Neonatal Tetanus remains a **public health threat in 12 countries:**

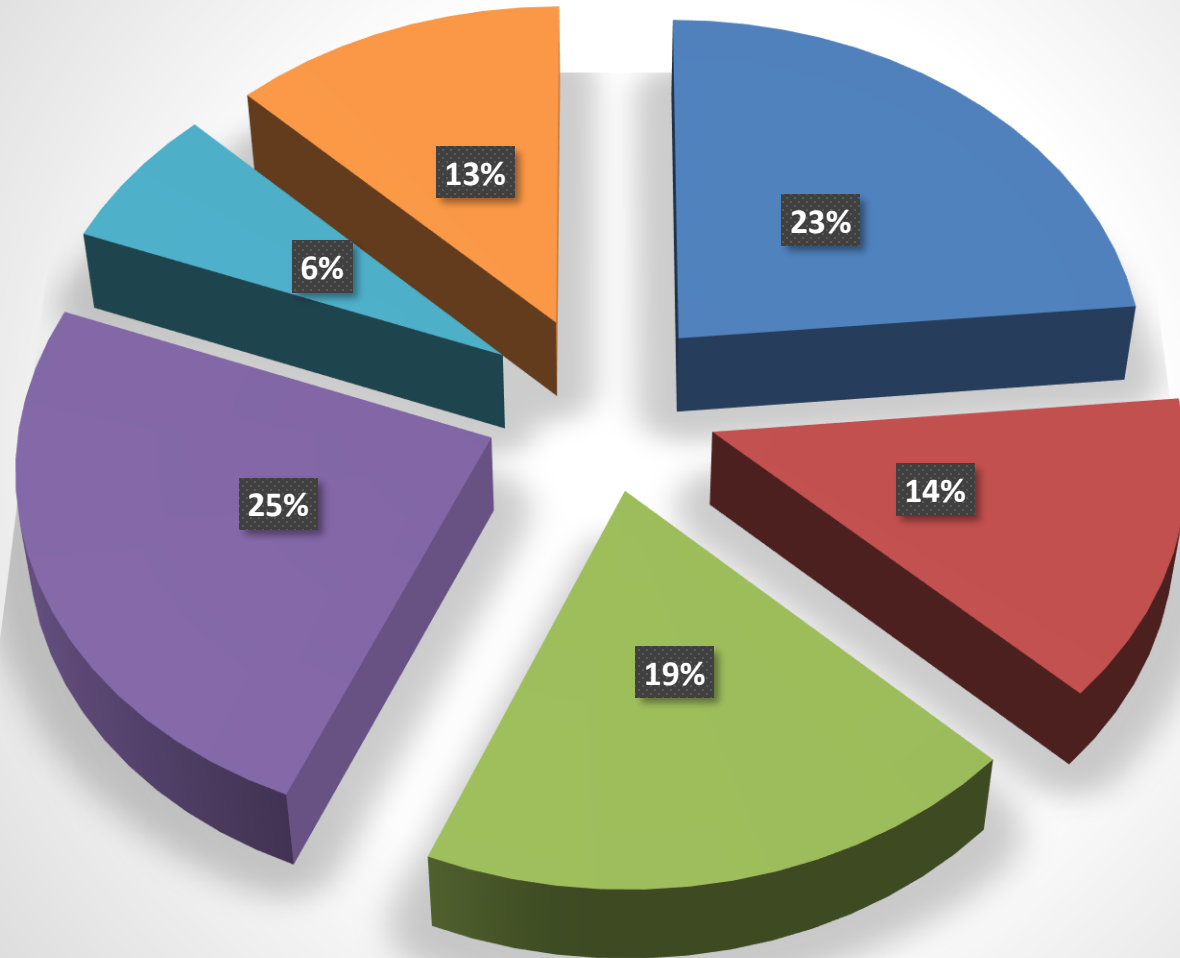
- Afghanistan
- Angola
- Central African Republic
- Guinea
- Mali
- Nigeria
- Pakistan
- Papua New Guinea
- Somalia
- South Sudan
- Sudan
- Yemen

# Use of Figures

## Pie graphs

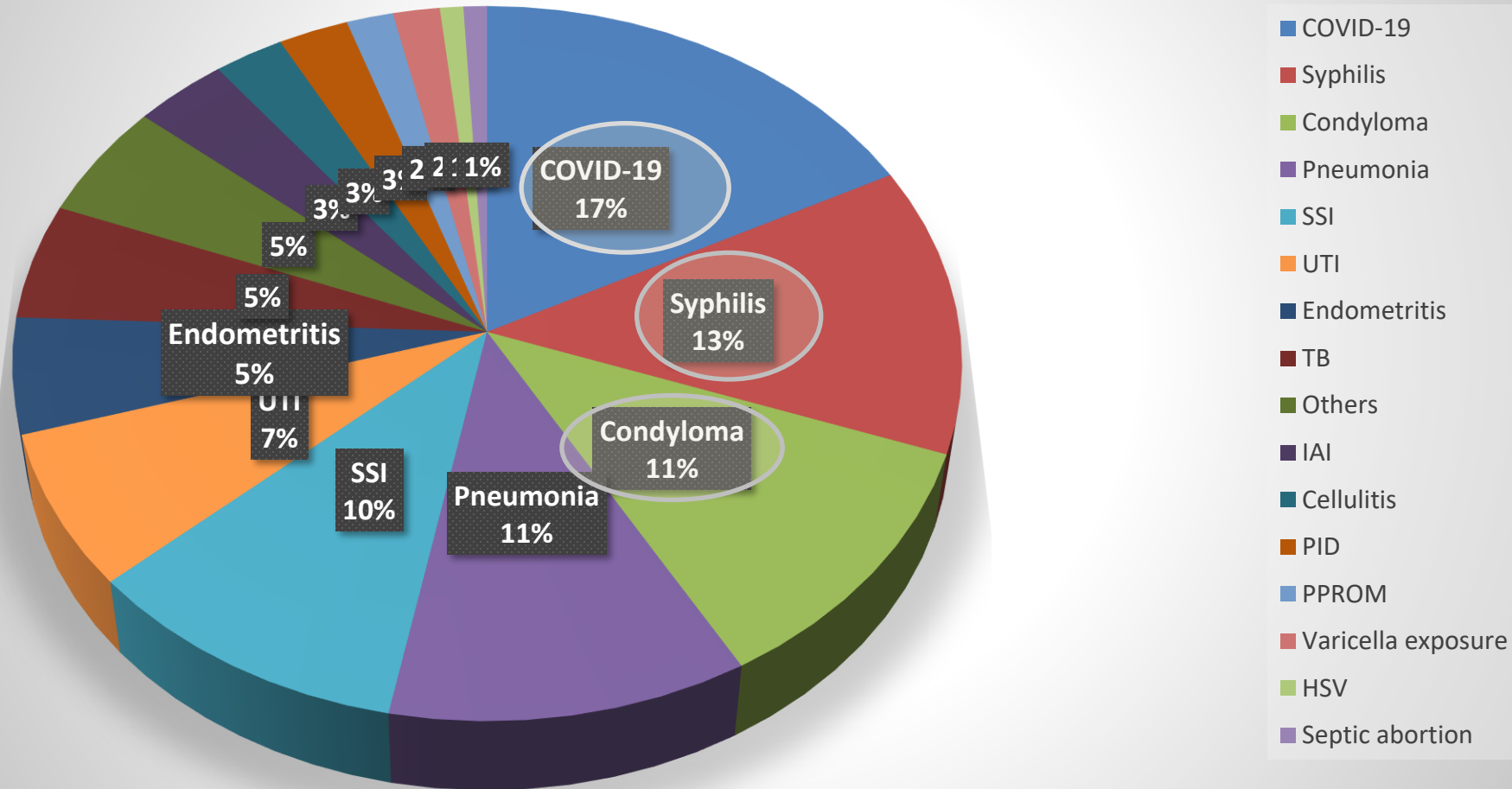
- Compare the parts of a whole
- Show no more than 6 slices
- Position largest slice at 12 or 6 o'clock position.

# 1st Q



- First
- Second
- Third
- Fourth
- Fifth
- Sixth

# IN-PATIENT OBSTETRIC REFERRALS 2021



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Rules on  
Online  
Presentation

Introduce everyone at the beginning.

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Ensure you have a clean, work-appropriate background.

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Eliminate distractions.

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Rules on  
Online  
Presentation

Look into the camera when talking instead of yourself.

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Adjust audio and video settings as needed.

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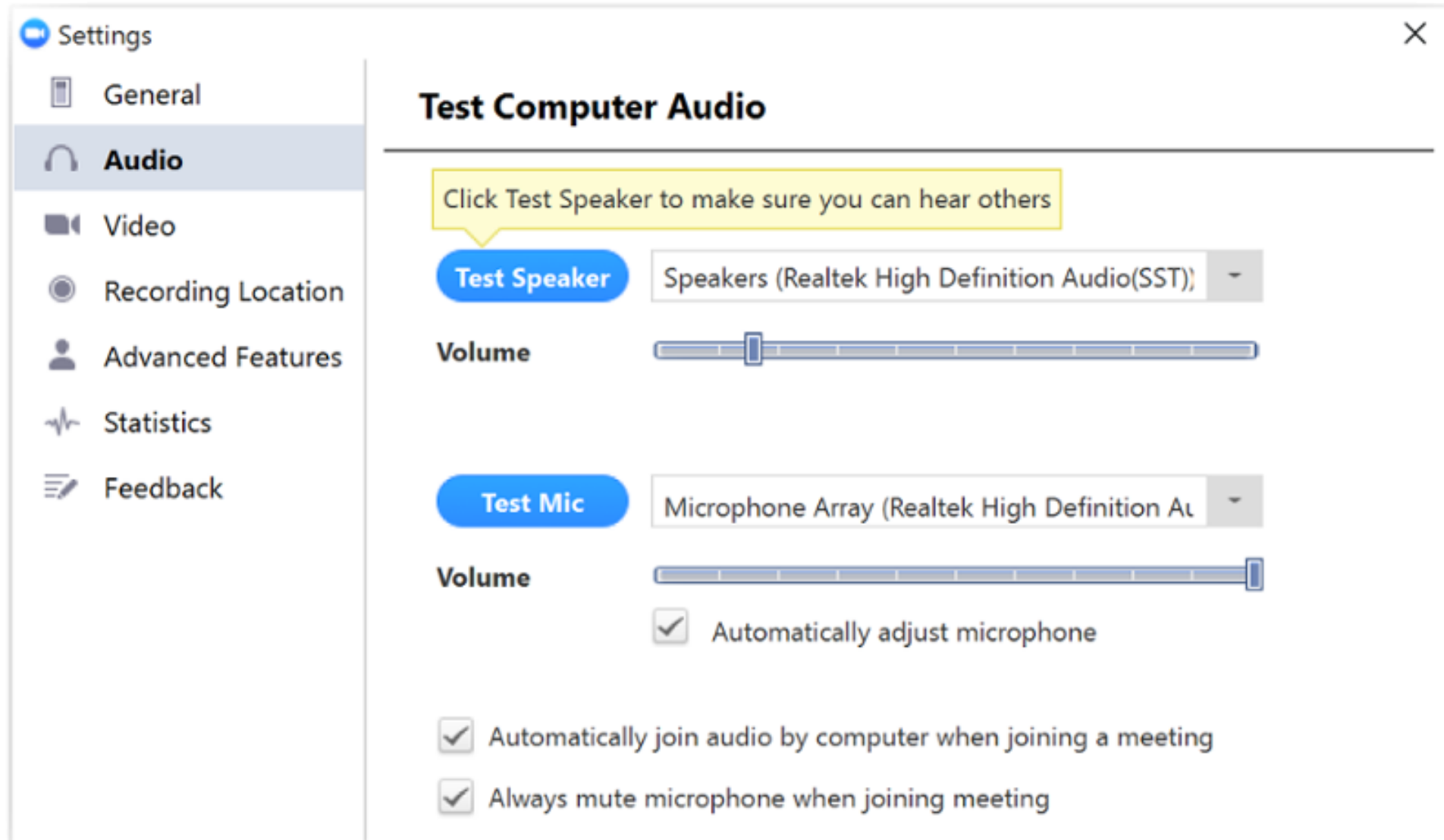
Invite appropriate participants only.

---

If you are the host, stick around.

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# Audio Settings



The screenshot shows the Zoom Settings application window with the 'Audio' section selected in the left-hand navigation pane. The main content area is titled 'Test Computer Audio'. A yellow callout box contains the text: 'Click Test Speaker to make sure you can hear others'. Below this, there are two sections for testing audio output and input. The first section, 'Test Speaker', features a blue 'Test Speaker' button, a dropdown menu showing 'Speakers (Realtek High Definition Audio(SST))', and a volume slider. The second section, 'Test Mic', features a blue 'Test Mic' button, a dropdown menu showing 'Microphone Array (Realtek High Definition Audio)', a volume slider, and a checked checkbox for 'Automatically adjust microphone'. At the bottom of the window, there are two more checked checkboxes: 'Automatically join audio by computer when joining a meeting' and 'Always mute microphone when joining meeting'.

Settings

- General
- Audio**
- Video
- Recording Location
- Advanced Features
- Statistics
- Feedback

## Test Computer Audio

Click Test Speaker to make sure you can hear others

**Test Speaker** Speakers (Realtek High Definition Audio(SST))

**Volume**

**Test Mic** Microphone Array (Realtek High Definition Audio)

**Volume**

Automatically adjust microphone

Automatically join audio by computer when joining a meeting

Always mute microphone when joining meeting

# Audio Settings

1. Select the speakers you want to test from the list of your computer's audio playback devices listed in the drop-down next to the **Test Speaker** button.
2. Click the **Test Speaker** button.
3. Adjust the volume of the selected playback device.
4. Select the microphone you want to test from the list of your computer's audio recording devices listed in the drop-down next to the **Test Mic** button.
5. Click the **Test Mic** button.
6. Adjust the volume of the selected recording device.
7. Choose your audio preferences for meetings.

# Video Settings

The Video Settings provide you the ability to determine your preferences during meeting participation.

1. Choose the camera you want to use from the “Camera” dropdown list.
2. Choose between widescreen and original aspect ratios.
3. Choose your video preferences for meetings.

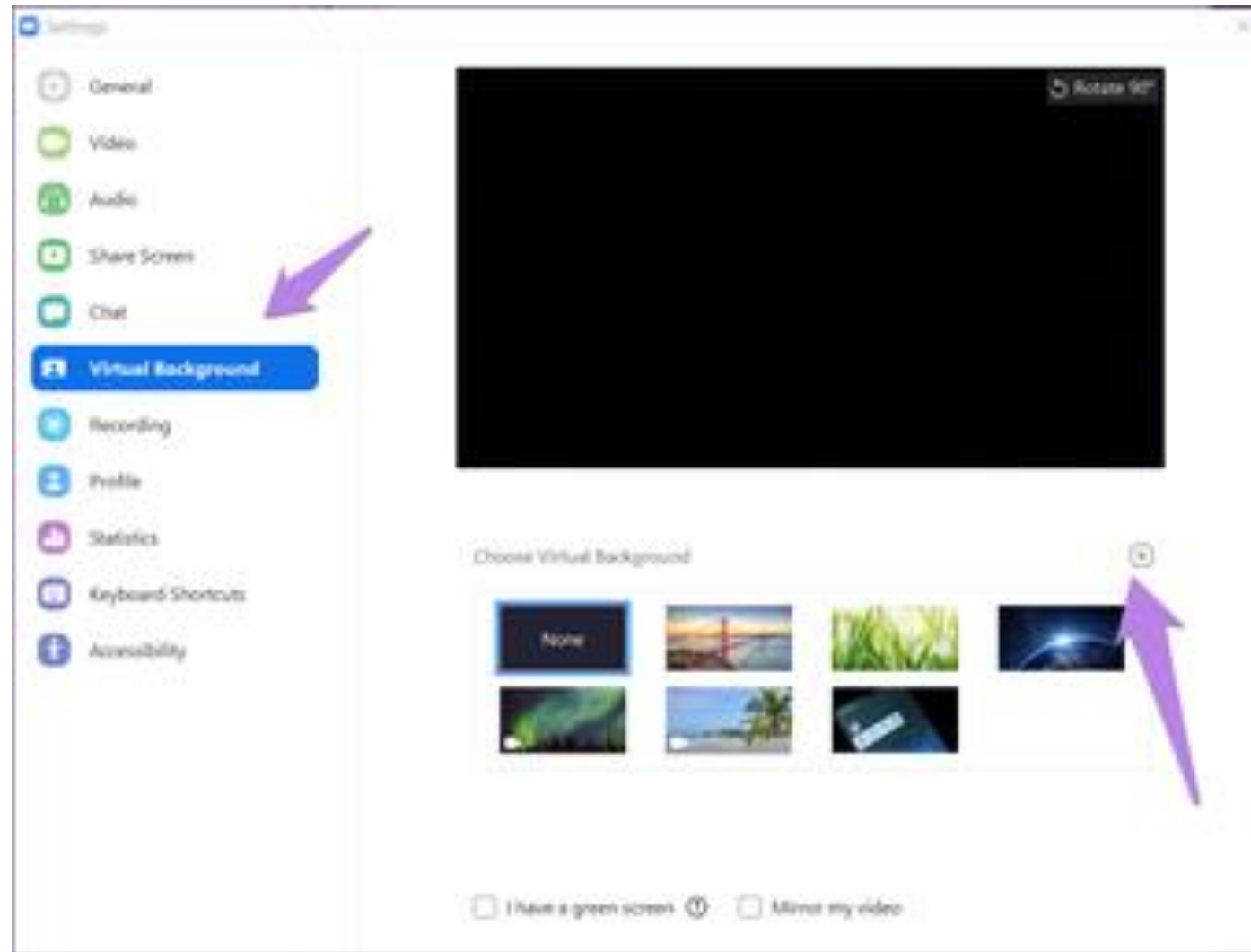
**Note:** The widescreen aspect ratio presents black bars on both sides of the video playback.

## Add Virtual Background to Zoom Meetings

You can either choose from the available virtual backgrounds or add your own.

To change your background, go to the Zoom settings. Click on Virtual Background from the left sidebar. Select a background. Click on the add icon to upload from your PC.

# Add Virtual Background to Zoom Meetings



# In Summary

1. Know your objectives.
2. State the outline.
3. Know your audience.
4. Identify information that needs graphic representation.
5. An effective presentation is getting the message across.
6. An effective message is clear, short and simple.