The background features abstract, overlapping green geometric shapes in various shades, including light lime green, medium green, and dark forest green, creating a modern and dynamic feel.

# Marshall Teen Talk: Using telehealth and web based resources to teach rural teens reproductive health

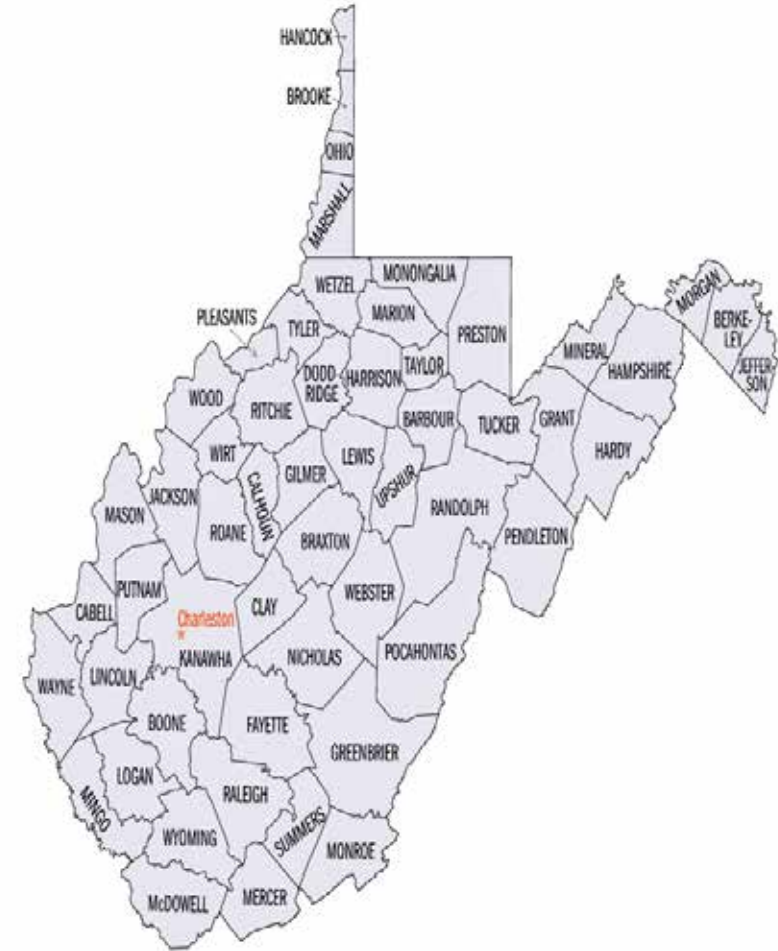
Erin Casey, MS

Wes Urian

Marshall University School of Medicine

# Teen Birth Rate: Variations among counties

- ▶ Monongalia 12.6/1000
- ▶ Gilmer 15.4/1000
- ▶ Brooke 20.8/1000
  
- ▶ Webster 65.9/1000
- ▶ Logan 70.6/1000
- ▶ Fayette 72.2/1000
- ▶ Mingo 74/1000
- ▶ Lincoln 75.2/1000
- ▶ McDowell 78.1/1000 (2013)
  - ▶ 14% high school drop out rate (2014)
  - ▶ 45.4% children in homes below poverty level (2013)
  - ▶ Highest among all 55 counties



# Background:

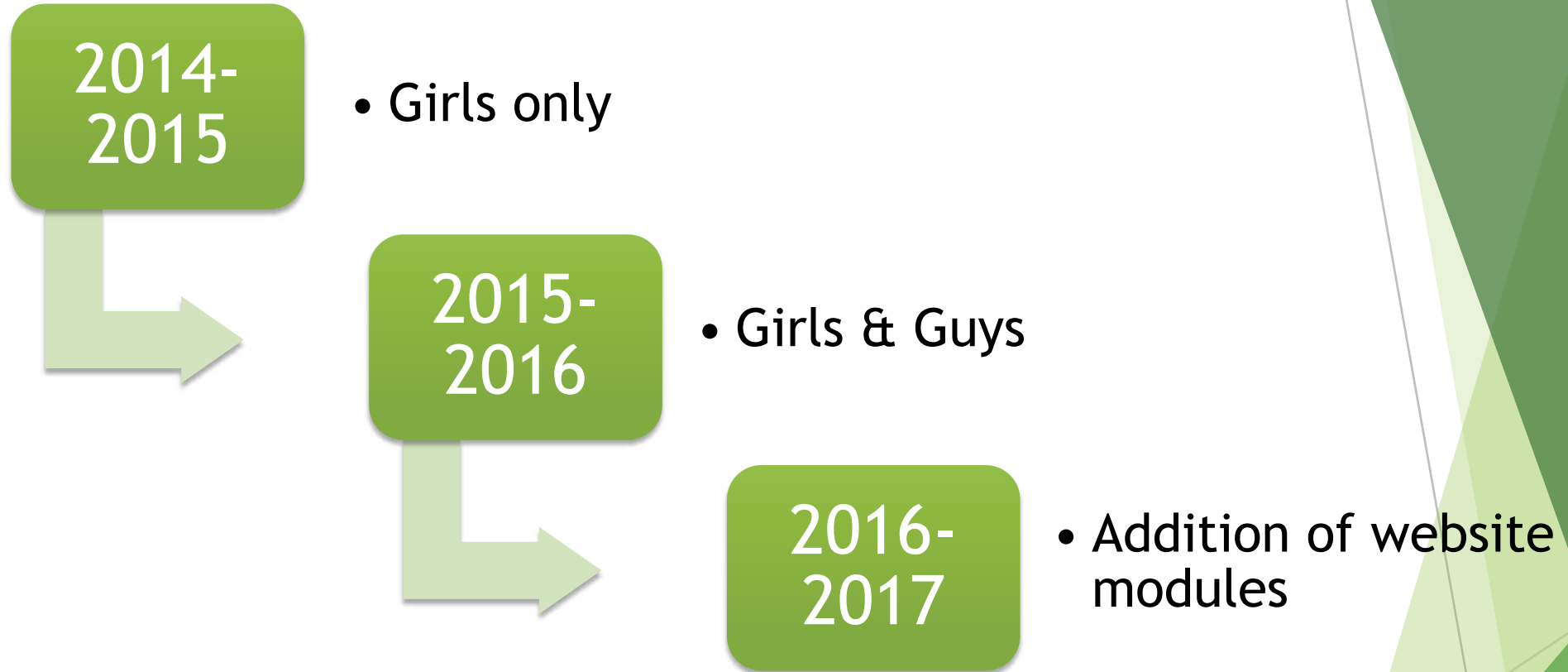
## Sex among High School Students In United States Youth Risk Behavior Surveillance Survey, 2015

- ▶ Ever had sex by Grade
  - ▶ 9<sup>th</sup>= 27.3%
  - ▶ 10<sup>th</sup>= 35.7%
  - ▶ 11<sup>th</sup>= 49.6%
  - ▶ 12<sup>th</sup>= 58.1%
  
- ▶ 11.5% have had 4 or more partners

# Background: Telehealth

- ▶ Provision of medical counseling from a distal site through the use of teleconferencing communication.
- ▶ Patients at a distal site are able to converse with medical provider they see on a television screen.
  
- ▶ Marshall Teen Talk
  - ▶ Established in afterschool program in McDowell County High Schools since 2014-15 school year
  - ▶ Teleconferencing equipment in Center for Rural Health
    - ▶ Connects to Mount View & River View High School in McDowell County

# Marshall Teen Talk



Yoost JL, et al. The Use of Telehealth to Teach Reproductive Health to Female Rural High School Students. *J Pediatr Adolesc Gynecol*. 2016 Oct 11

Singh R, et al. Promoting Reproductive Health Using Telemedicine: A Prospective Study Among Rural Appalachian High School Teens. *Marshall Journal of Medicine*. 2017

# Materials & Methods

- ▶ Four afterschool telehealth sessions covering reproductive health topics
- ▶ Taught by team of medical students with attending physician guidance
- ▶ Curriculum adapted from FLASH curriculum for telehealth



# Data

## Data Collection

- ▶ Pre Test
  - ▶ Set of 20 Reproductive health knowledge questions
  - ▶ Demographic information
- ▶ Post Test (completed after final session)
  - ▶ Same 20 reproductive health knowledge questions
  - ▶ Assessment of Teen Talk program
- ▶ All data submitted with online survey tool on Teen Talk website using school computers or Ipads
- ▶ All participation (attendance, survey completion) optional
- ▶ All data submitted anonymous/ No identifying information

## Incentives:

- ▶ Drawings done for Amazon gift cards for those attending and survey completion
- ▶ Funding for trip to Marshall's campus in spring following program completion

# Session Content

- ▶ Four afterschool sessions
- ▶ Divided into males/females

Session Topic	What is included
Anatomy & How my body works	<ul style="list-style-type: none"><li>• Male/Female Anatomy</li><li>• Menstrual Cycle</li><li>• Ovulation &amp; Risk of Pregnancy</li><li>• Sexuality</li></ul>
Relationship Health	<ul style="list-style-type: none"><li>• Gender Stereotypes</li><li>• Healthy &amp; Unhealthy relationships</li><li>• Types of Communication</li><li>• Consent</li></ul>
Birth Control	<ul style="list-style-type: none"><li>• Abstinence</li><li>• Types of contraception</li><li>• Efficacy</li><li>• Common Myths &amp; Misconceptions</li></ul>
STD Prevention	<ul style="list-style-type: none"><li>• Condom use</li><li>• Types of STDs</li><li>• Common myths &amp; misconceptions</li><li>• HPV vaccination</li></ul>



# Web Modules

- ▶ In addition to after school interactive telehealth sessions, four website modules available
- ▶ Optional to participants
- ▶ Set of short videos
- ▶ Short questionnaire (6 questions) available after completion

Teen Talk provides accurate health information to high school teens to empower them to make safe and healthy choices.

# TEEN TALK

Session 1   Session 2   Session 3   Session 4

**Mission Statement**

The purpose of Teen Talk is to provide accurate, unbiased information to high school students regarding their bodies and their relationships to promote risk reduction and help them make healthy and wise choices.

From home page click on a session

## Session 3



### Session 3 Introduction

Duration 1:29



### Abstinence & When mistakes happen

Duration 4:08



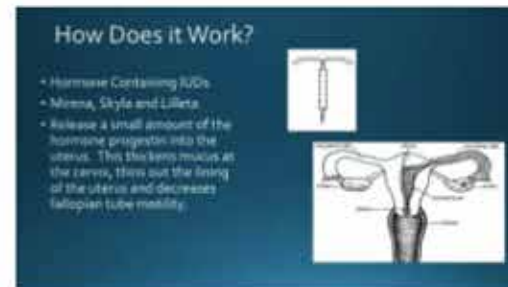
### Teen Birth Control: Pills, patches, rings, & "the shot"

Duration 5:11



### Teen Birth Control: The implant

Duration 3:29



### Teen Birth Control: The IUD

Duration 5:23

# Results

- ▶ 35 students attended at least one session
  - ▶ 21 females (60%)
  - ▶ 14 males (40%)
  
- ▶ 19 from Mount View HS (54.3%)
- ▶ 16 from River View HS (45.7%)

# Results

29 Students completed the initial knowledge and demographic survey

Average age 15.4 (range 13-18)

## Race

- ▶ AA: 15 (51.7%)
- ▶ White: 13 (44.8%)
- ▶ Hispanic: 1 (3.4%)

## Grade

- ▶ 9th: 13 (44.8%)
- ▶ 10th: 5 (17.2%)
- ▶ 11th: 8 (27.5%)
- ▶ 12th: 3 (10.3%)

## Living situation:

- ▶ Lives with single parent: 10 (34.4%)
- ▶ Grandparents: 7 (24.1%)
- ▶ Both Parents: 11 (37.9%)

## Mother's age at delivery

- ▶  $\leq 21$ : 10 (34.4%)
- ▶  $< 18$ : 4 (13.8%)

## Mother's education

- ▶ Highschool/GED: 12 (41.4%)
- ▶ Middle school: 2 (6.9%)
- ▶ College or more: 14 (48.3%)

## Father's education

- ▶ Highschool/GED: 22 (75.8%)
- ▶ Middle school: 2 (6.9%)
- ▶ College or more: 4 (13.7%)
- ▶ Vocational: 1 (3.4%)

# Results

## Have you ever had sex with anyone?

- ▶ Yes: 9 (31%)
  - ▶ No 9<sup>th</sup> graders

## Do you plan on having sex in the next year?

- ▶ Yes: 7 (24.1%)
- ▶ Not Sure: 14 (48.2%)
- ▶ No: 8 (27.5%)

## Do you want to be pregnant within the next year?

- ▶ Yes: 2 (6.8%)
- ▶ Both girls, 11<sup>th</sup> & 12<sup>th</sup> grades

## Among those sexually active (n=9)

### How often do you use a condom?

- ▶ All of the time: 4
- ▶ Most of the time: 3
- ▶ Never: 2

### How often do you use hormonal birth control?

- ▶ All of the time: 4
- ▶ Some of the time: 1
- ▶ Never: 4

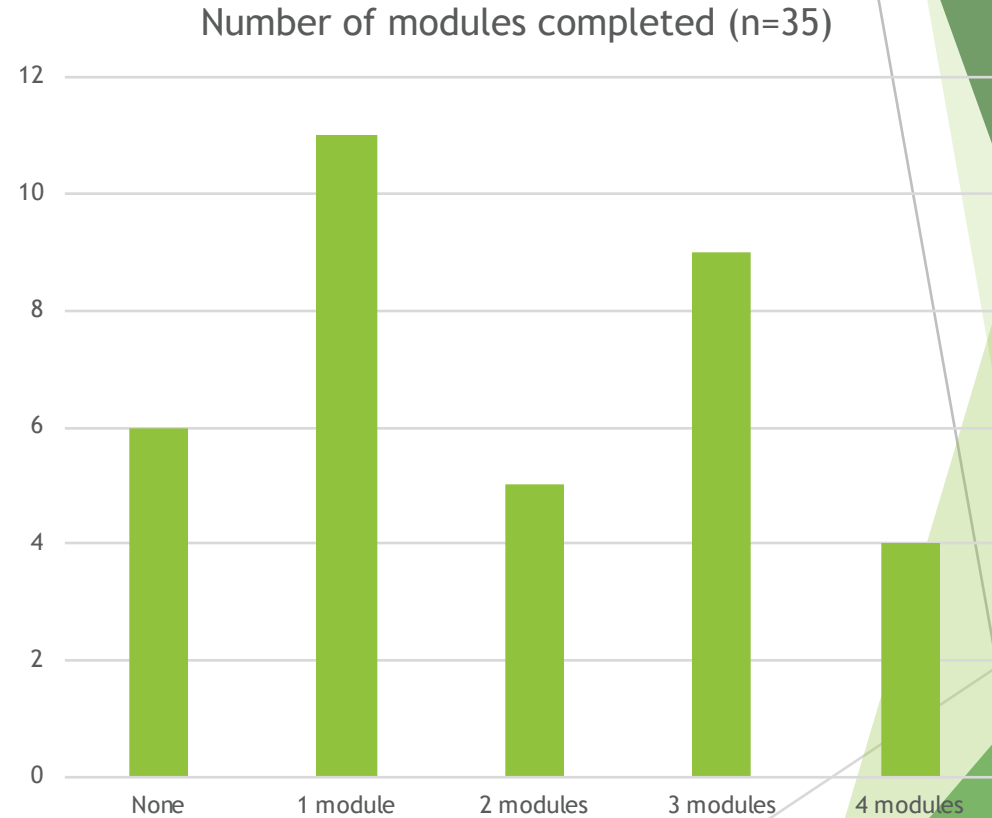
# Reproductive Health Knowledge

- ▶ Perfect Score of 20/20
- ▶ 24 of the 29 completed the post-test

Pre Test Score Average	Post Test Score Average	
14.38 (SD 2.24)	17.14 (SD 1.85)	P= <.001

# Web based modules:

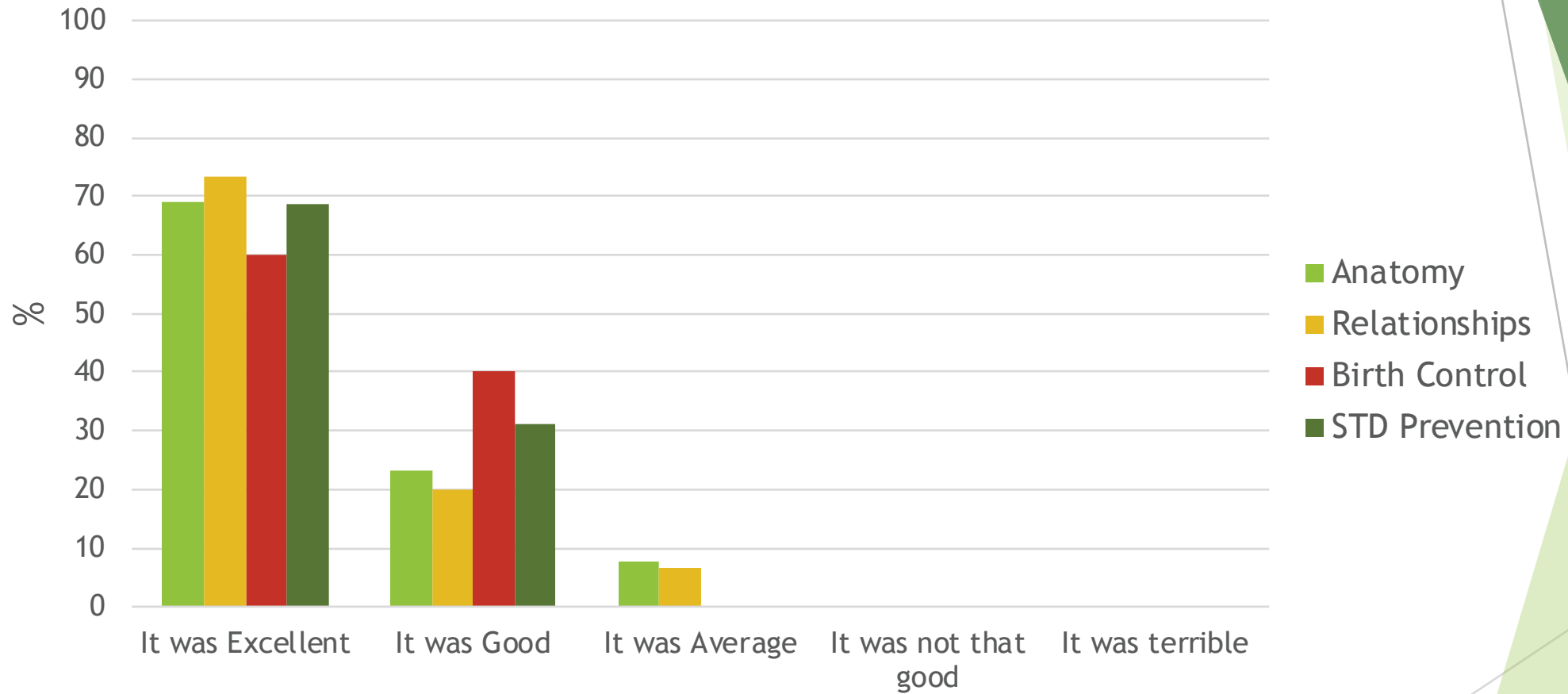
Module	Number of Students Completing
Anatomy	13
Relationship Health	15
Birth Control	16
STD Prevention	12



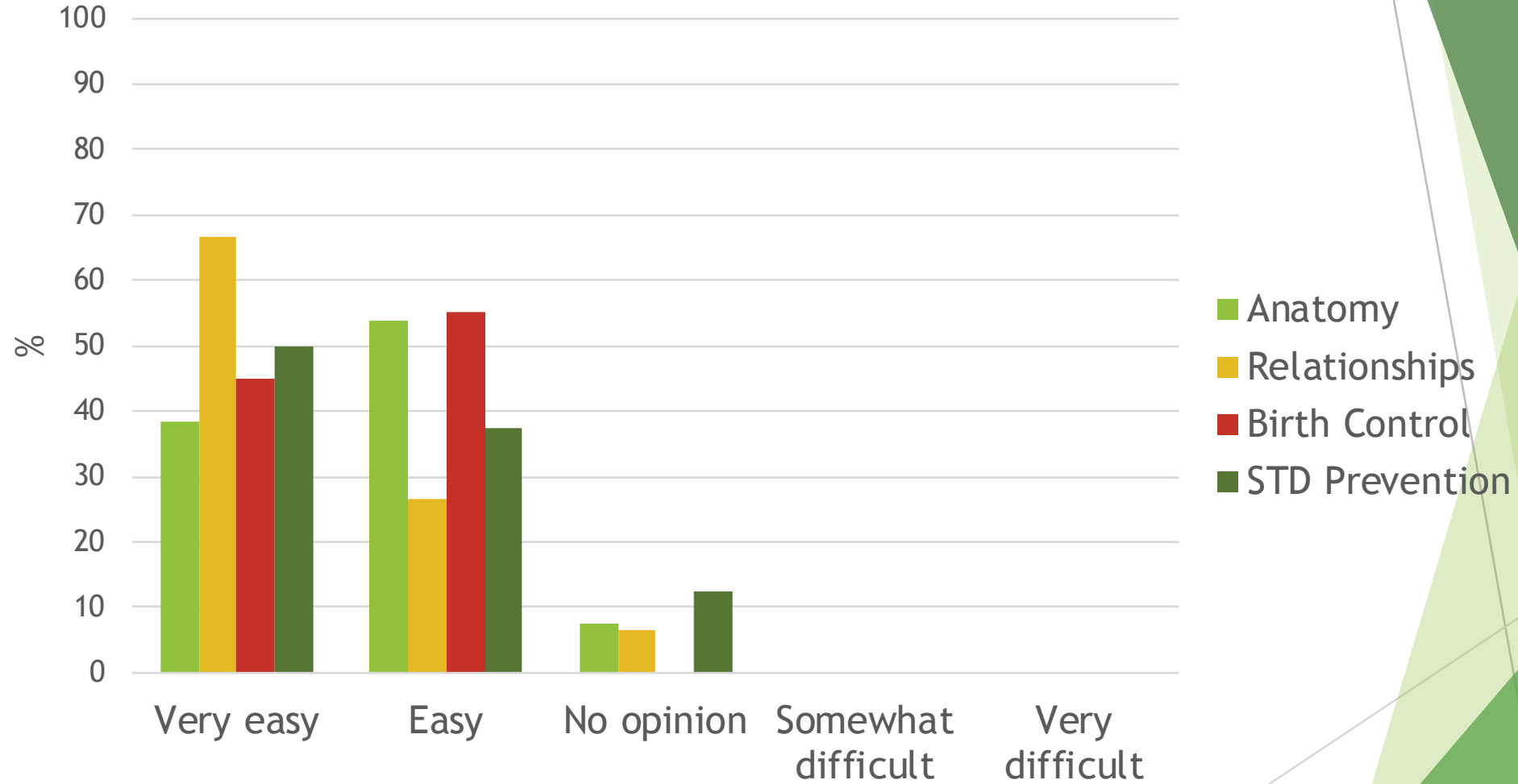
- ▶ No difference in post-test scores among students completing at least 2 modules compared to others
- ▶ 17.44 vs 17.14 (p= 0.217)



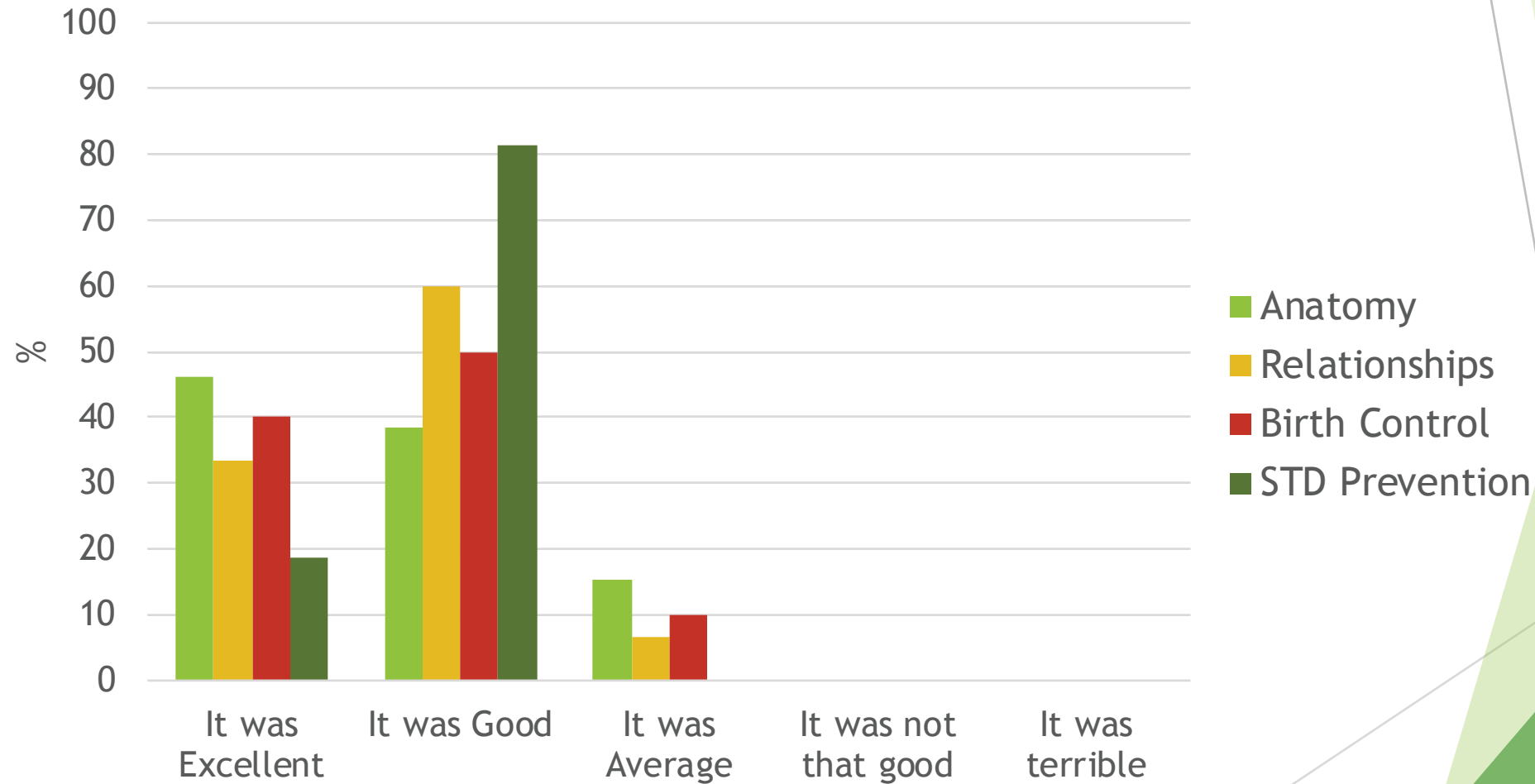
# What did you think about this module overall?



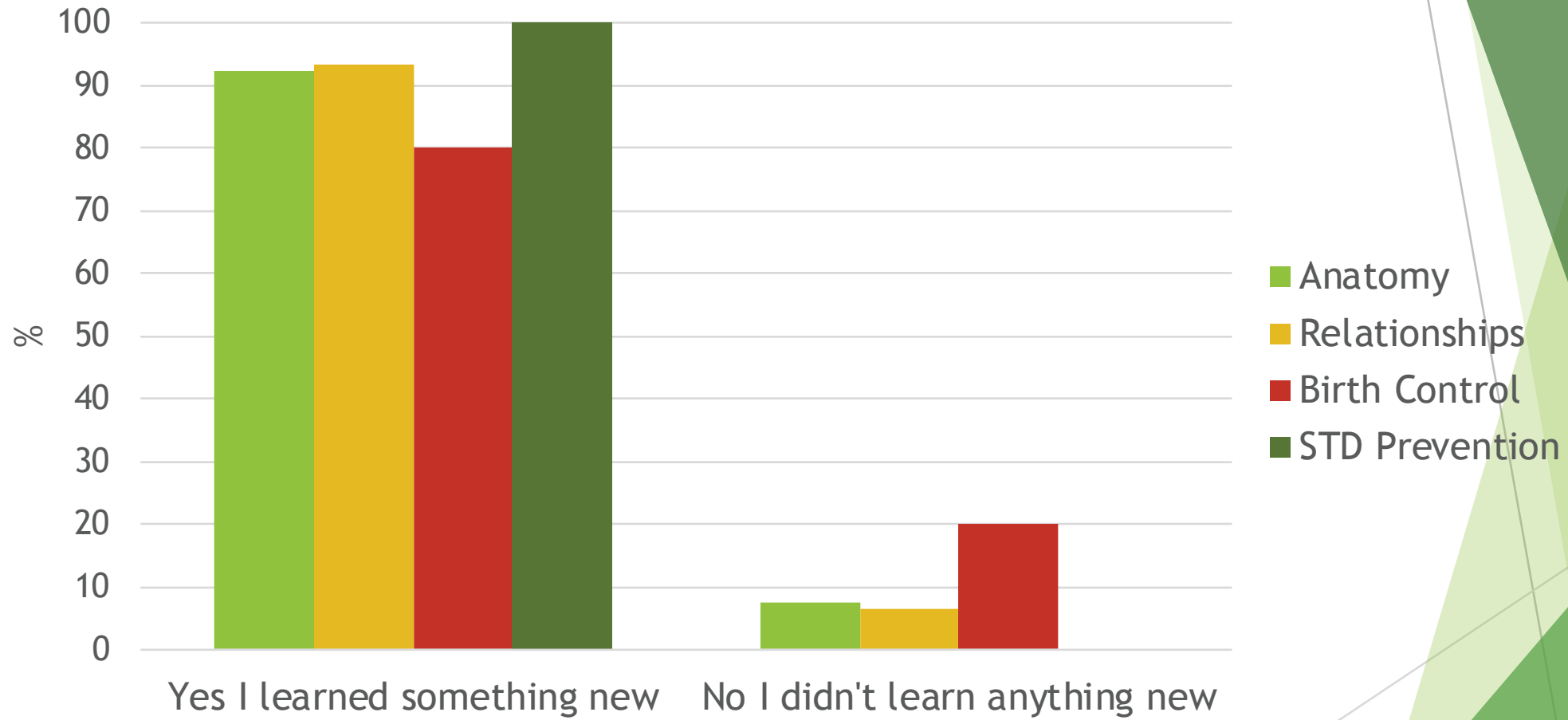
## How easy was it to understand the information?



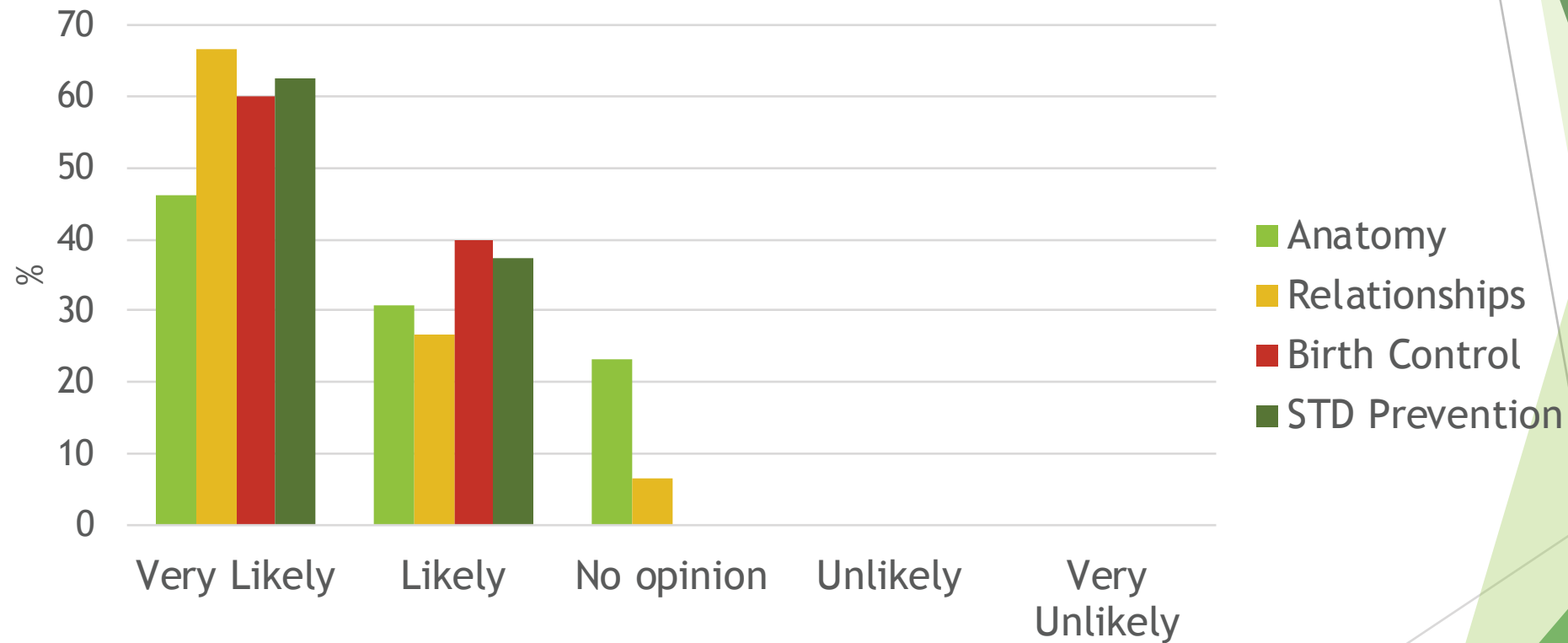
## How much did you like the format or presentation of material in this module?



## Did you learn something from this module?



## How likely are you to recommend this module to a friend?



# Final Assessment (n=24)

## How effective do you think Teen Talk is in teaching reproductive health overall?

- ▶ Very Effective: 20 (83.3%)
- ▶ Effective 4 (16.7%)

## How likely are you to participate in Teen Talk in the future?

- ▶ Very Likely: 19 (79.1%)
- ▶ Likely: 2 (8.3%)
- ▶ No opinion: 3 (12.5%) (11<sup>th</sup>/12<sup>th</sup> graders)

## How likely are you to recommend Teen Talk to a friend?

- ▶ Very Likely: 17 (70.8%)
- ▶ Likely: 7 (29.2%)

# What did you like about Teen Talk?

- ▶ “Not being ashamed to talk about anything”
- ▶ “I like that they teach new things”
- ▶ “Getting questions answered”
- ▶ “They were very honest”
- ▶ “It seems to be accurate information”
- ▶ “Learning about new birth control types”
- ▶ “They made it clear that we know how and where to find condoms”
- ▶ “I like the med students”

# Conclusion

- ▶ Telehealth is an effective means to teach reproductive health
- ▶ Utilizing tools such as web based material is well accepted among teens, but did not improve knowledge scores in our limited sample



# Acknowledgements

- ▶ This work was supported by the Robert C. Byrd Center for Rural Health at the Joan C. Edwards School of Medicine, Marshall University
- ▶ Jennie Yoost MD, MSc
- ▶ Brian Dunlap MD