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

Kids Count Data Center. [http://datacenter.kidscount.org](http://datacenter.kidscount.org)
Background:
Sex among High School Students In United States
Youth Risk Behavior Surveillance Survey, 2015

- Ever had sex by Grade
  - 9th= 27.3%
  - 10th= 35.7%
  - 11th= 49.6%
  - 12th= 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

2014-2015 • Girls only

2015-2016 • Girls & Guys

2016-2017 • Addition of website modules


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

<table>
<thead>
<tr>
<th>Session Topic</th>
<th>What is included</th>
</tr>
</thead>
</table>
| **Anatomy & How my body works** | • Male/Female Anatomy  
• Menstrual Cycle  
• Ovulation & Risk of Pregnancy  
• Sexuality |
| **Relationship Health**     | • Gender Stereotypes  
• Healthy & Unhealthy relationships  
• Types of Communication  
• Consent |
| **Birth Control**           | • Abstinence  
• Types of contraception  
• Efficacy  
• Common Myths & Misconceptions |
| **STD Prevention**          | • Condom use  
• Types of STDs  
• Common myths & misconceptions  
• HPV vaccination |
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

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

Birth Control Implant

How Does it Work?
- Hormone Controlling Fertile Cycle
- Nexplanon, Style and Liletta
- Release small amount of the hormone progesterone into the uterus. This thins the lining of the uterus and decreases ability to receive implantation.

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
- <=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 9th 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, 11th & 12th 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

<table>
<thead>
<tr>
<th>Pre Test Score Average</th>
<th>Post Test Score Average</th>
<th>P= &lt;.001</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.38 (SD 2.24)</td>
<td>17.14 (SD 1.85)</td>
<td></td>
</tr>
</tbody>
</table>
Web based modules:

<table>
<thead>
<tr>
<th>Module</th>
<th>Number of Students Completing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>13</td>
</tr>
<tr>
<td>Relationship Health</td>
<td>15</td>
</tr>
<tr>
<td>Birth Control</td>
<td>16</td>
</tr>
<tr>
<td>STD Prevention</td>
<td>12</td>
</tr>
</tbody>
</table>

Number of modules completed (n=35)
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?

- It was Excellent
- It was Good
- It was Average
- It was not that good
- It was terrible

- Anatomy
- Relationships
- Birth Control
- STD Prevention
How easy was it to understand the information?

- Very easy
- Easy
- No opinion
- Somewhat difficult
- Very difficult

Categories:
- Anatomy
- Relationships
- Birth Control
- STD Prevention
How much did you like the format or presentation of material in this module?

- It was Excellent
- It was Good
- It was Average
- It was not that good
- It was terrible

Categories:
- Anatomy
- Relationships
- Birth Control
- STD Prevention
Did you learn something from this module?

- Yes I learned something new
- No I didn't learn anything new

- Anatomy
- Relationships
- Birth Control
- STD Prevention
How likely are you to recommend this module to a friend?

- Anatomy
- Relationships
- Birth Control
- STD Prevention
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%) (11th/12th 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