Keys to Preparing an Effective Poster for ASM Microbe
Logistical Tips

• Make sure to bring a copy of your acceptance letter that indicates when you can get into the Exhibit and Poster Hall to hang up your poster.
  – Please go to Poster Assistance if you forgot your letter

• Remember to bring an electronic copy of your poster (just in case), especially if you are checking your poster on a plane (not recommended) or shipping your poster
Find important information at asm.org

- Poster size & specifications
- Poster printing options
- Presentation tips
- Presentation schedule, set up times, and poster hall hours
- Poster storage and removal
- Visit https://asm.org/Events/ASM-Microbe-2019/Home to view all the important information
Poster Set Up

Posters must be mounted on your assigned and numbered poster board before 10:30 am on the day of your scheduled presentation. Posters remain on the boards for the full day assigned. Removal times are posted in the schedule above.

You must bring your notification letter to gain entrance to the Exhibit and Poster Hall in the Moscone Convention Center, South Building, South Lobby, to mount or dismantle your poster (when the hall is closed to general attendees).

• Thumb Tacks/Push Pins: Will be available for all Poster Presenters outside of the hall at Poster Services, as well as at Track Hubs inside the Exhibit and Poster Hall.

• Only the poster presenter will be permitted to enter the Exhibit and Poster Hall to set up his or her poster. Poster Presenters need to either have their acceptance letter with them, or check in at Poster Services to obtain a pass for the Hall.
Poster Removal

Posters must be dismantled on the day of your presentation between the following hours:

- Friday, June 21 | 5 pm – 5:30 pm
- Saturday, June 22 | 5 pm – 5:30 pm
- Sunday, June 23 | 4 pm – 4:30 pm

Posters remaining on the boards after the removal window will be collected and available for pick up at Poster Services. Those attendees that need to remove their poster before the official removal time due to a prior commitment may do so.
Poster Tips – Size

• Posters should be no larger than 8 ft (L) x 4 ft (H).
  – You want people to be able to comfortably read your poster

• Make your poster readable – consider your font!
  – We recommend double-spaced sans-serif fonts no smaller than 14 pt. Headings and main text should be 40 pt font
    • Make sure it is readable from 4 feet away
    • San Serif fonts: Arial, Caibri, Century Gothic, Geneva, Helvetica
  – Ordinary type or carelessly prepared handwritten copy is unacceptable.
  – Utilize handouts to supplement your poster and eliminate hard-to-read text. Graphics are great!

Embrace white space and focus text at eye-level, leaving space on the edge
Poster Tips – Asthetics

• Clean and professional looking layout, colors, and font
• Spell checked and proofread – avoid typos
• Balanced text and figures
  – The poster is able to be presented and independently read
• Some white/blank space is okay!
  – Neutral or grey colors are easiest on the eyes, and highlight color photos
Poster Tips – Text

• Include a copy of abstract
  – Note if your abstract has been revised since submission
• Bullets are preferred over sentences
  – Bullets are easier to read and interpret
• This is not a manuscript
  – Sometimes less is more!
• Again, remember font size and type:
  – We recommend double-spaced sans-serif fonts no smaller than 14 pt. Headings and main text should be 40 pt font
Poster tips - Data

• Simple figures/graphs are better than more complex ones
  – This is especially important if there is a large amount of viewing time when you will not be present

• Use tables
  – Tables are a good way to summarize large amounts of categorical data

• This is not a manuscript
  – Sometimes less is more. Readability is important. Use handouts if needed.
Poster Tips – Continued

• Many programs can be used to build posters (Powerpoint, Adobe, etc) – make sure your printer accepts the format you use
  – Many presenters find that conversions can disrupt spacing and images

• Do not forget to include your:
  – poster number, presentation date, author(s) and institution(s), phone number, e-mail address, and copy of your abstract

• Google and Youtube are excellent sources of additional tips and tricks!
Example of good spacing

Analytical performance of the Nanosphere Verigene RV+ assay and the Focus Simplexa Flu A/B & RSV kit

Kevin Alby1, Elena B Popowitch2, and Melissa B Miller2

1 Clinical Microbiology/Immunology Laboratory, UNC Health Care, Chapel Hill NC
2 Department of Pathology and Laboratory Medicine, UNC School of Medicine, Chapel Hill NC

Abstract

Introduction: Viral respiratory infections are a leading cause of morbidity and mortality. Influenza and respiratory syncytial virus (RSV) are responsible for the majority of severe respiratory illnesses during the winter months. Infections with influenza affect people of all ages, are easily spread from person to person, and result in hundreds of thousands of hospitalizations every year. RSV infections primarily affect very young children as well as the elderly. These infections result in upwards of 100,000 hospitalizations of children every year. The purpose of this study was to compare the performance characteristics of two FDA cleared assays for detecting influenza A/B and RSV.

Methods: Two hundred retrospective samples were analyzed on two systems according to the manufacturers’ package inserts. The two systems evaluated in this study were the Verigene RV+ assay (Nanosphere, Northbrook, IL) and the Simplexa Flu A/B & RSV kit for the Integrated Cycler (Focus Diagnostics, Cypress, CA). Laboratory-developed LDT’s (LDT) for influenza A/B and RSV served as the standard for comparison and resolution of discordant samples.

Results: Of the 200 retrospective samples analyzed in this study, 182 samples (91%: 81 negative, 101 positive) were concordant among all three methods. There was only one false positive by the Verigene RV+ assay (influenza A+ RSV+) that was negative upon repeat. There were no false positives by the Simplexa test. The introduction of the sensitivity by assay and virus is as follows:

<table>
<thead>
<tr>
<th>Assay</th>
<th>Influenza A</th>
<th>Influenza B</th>
<th>RSV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verigene RV+</td>
<td>96.4% (53/55)</td>
<td>100% (21/21)</td>
<td>100% (42/42)</td>
<td>98.3% (116/118)</td>
</tr>
<tr>
<td>Simplexa</td>
<td>81.8% (45/55)</td>
<td>76.2% (16/21)</td>
<td>98.2% (41/42)</td>
<td>85.6% (101/118)</td>
</tr>
</tbody>
</table>

Taken together our results indicate a sensitivity and specificity of 95.3% and 88.3% for the Verigene RV+ assay and a sensitivity and specificity of 85.6% and 100% for the Simplexa assay.

Conclusions: We undertook a side by side evaluation of two FDA cleared assays for detecting influenza A/B and RSV. The assay turn around time for the two systems was similar. Hands on time for the RSV assay was significantly less than the Simplexa assay, about 15 minutes as compared to 45 minutes, though only one sample could be run on a module at a time. In terms of analytical performance, the Verigene RV+ assay showed superior sensitivity and a comparable specificity to the Simplexa assay.

Results

<table>
<thead>
<tr>
<th>Assay</th>
<th>Retrospective</th>
<th>Prospective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensitivity</td>
<td>Specificity</td>
</tr>
<tr>
<td>Verigene RV+</td>
<td>98.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Simplexa</td>
<td>85.6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The correlation between mean LDT cycle threshold (CT) and positive results for the two assays are as follows (retrospective samples only):

<table>
<thead>
<tr>
<th>Assay</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verigene RV+</td>
<td>98.2%</td>
<td>85.6%</td>
</tr>
<tr>
<td>Simplexa</td>
<td>85.6%</td>
<td>85.6%</td>
</tr>
</tbody>
</table>

Conclusions

We undertook a side by side evaluation of two FDA cleared assays for detecting influenza A/B and RSV. In the retrospective study, the differences in sensitivities for influenza A (96.4% vs. 81.8%) and influenza B (100% vs. 76.2%) detection were statistically significant (Fisher’s exact test, p=0.029 and p=0.048), while the sensitivities for RSV and overall specificities were not. Therefore, we compared the performance of the assays using fresh prospective specimens to determine any bias in the retrospective study, but it should be noted the positive rate for influenza during the prospective study was only 2.4% compared with 8.8% of the retrospective samples, due to a relatively mild influenza season. Overall, our analysis demonstrates the Simplexa assay is not as analytically sensitive as the Verigene RV+. Although both assays were easy to use, the lack of a pre-extraction step allowed the hands on time required for the Verigene RV+ assay and allowed non-molecular trained technologists to perform the assay.

System Overview

<table>
<thead>
<tr>
<th>Assay</th>
<th>Time to Result</th>
<th>Hands on Time</th>
<th>Extraction</th>
<th>Subtyping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verigene RV+</td>
<td>2 hours 45 minutes – 1 sample</td>
<td>10-15 min</td>
<td>On board</td>
<td>FLU-A: H1, H3, 2009 H1N1 RSV A and B</td>
</tr>
<tr>
<td>Simplexa</td>
<td>2 hours – Up to 34 samples</td>
<td>45-50 min</td>
<td>Offline</td>
<td>None</td>
</tr>
</tbody>
</table>

Acknowledgements: The authors would like to sincerely thank Focus Diagnostics and Nanosphere for providing equipment and reagents for this study, as well as for travel support from Nanosphere.
How To Choose: Your Background

• Choose a simple background color scheme
  – Remember: people have differing eyesight
  – Neutral or gray colors will be easier on the eyes, and look better, than a bright color

• Avoid complex and distracting designs or color patterns
Example: Good Poster

Modification of the BD MAX Group B Streptococcus detection method to improve turnaround time

Ana María Cárdenas, Mei Yu, Paul H. Edelstein and Kevin Alby
Pereim School of Medicine, University of Pennsylvania, Philadelphia, PA.

Background: The CDC recommends screening pregnant women for vaginal-rectal Group B Streptococcus (GBS) colonization at 35-37 weeks. A selective enrichment broth (Carrot Broth) turns orange in as few as 5 hrs if beta-hemolytic GBS are present but will miss the non-hemolytic GBS since no color change is observed. Previously, in our laboratory, negative Carrot Broths were subincubated to GBS Detect plates to detect the non-hemolytic strains. In August 2015, the BD MAX molecular assay was implemented for GBS detection. The manufacturer’s protocol calls for sample enrichment in LIM broth ≥4 hrs, making 20hrs the shortest possible turnaround time for a positive result. In order to detect positive samples faster, our laboratory validated Carrot Broth as a replacement for LIM broth and set up a new testing algorithm in which all negative Carrot Broths are run on the BD MAX.

Methods: Our study included 100 vaginal-rectal swabs inoculated to both Carrot and LIM Broths. Samples were incubated at least 18hrs and were then tested side-by-side on the BD MAX. Discrepant results were resolved by broth subculture. Positivity rates and turnaround times of six months of testing using Carrot broth and GBS Detect plates (n = 1461) were compared with six months using the Carrot broth and BD MAX algorithm (n = 1906).

Results: GBS detection by BD MAX was not significantly different when Carrot, rather than LIM, Broth was used for bacterial enrichment (p = 0.07). In fact, there was a trend toward superior performance of BD MAX GBS detection when Carrot Broth was used for enrichment. The positivity rate of GBS in our patient population is ~34% and no significant change was observed after molecular test implementation (p = 0.31). About 61% of our positives are detected by Carrot Broth alone. The average turnaround time for GBS detection by the Carrot-BD MAX was significantly shorter than for Carrot-GBS Detect plates (31 vs. 32 hrs, p < 0.0001).

Conclusion: Carrot Broth was validated primarily to provide the fastest turnaround time for labor and delivery patients and showed no statistical difference when compared to LIM broth. By using Carrot instead of LIM broth as our enrichment media, 29% of our positive specimens were detected by Carrot Broth before a LIM-BD MAX result would have been available (~20hrs). The use of a molecular assay instead of culture alone did not increase GBS rates in our institution but did allow for significant earlier reporting of results 32 hrs on average.

Table 1. Initial analysis comparing the Carrot Broth and LIM Broth as enrichment media for the BD MAX. 5 out of 5 specimens were culture positive for GBS. Carrot Broth was not statistically different to LIM broth (P = 0.07 by McNemar analysis).

<table>
<thead>
<tr>
<th>Detection Method</th>
<th>Average TAT (hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrot - GBS Detect Plates</td>
<td>52</td>
</tr>
<tr>
<td>Carrot – BD MAX</td>
<td>31</td>
</tr>
<tr>
<td>Carrot Broth Only</td>
<td>22</td>
</tr>
</tbody>
</table>

Table 2. Average turnaround time for GBS detection using three detection methods. There was a statistically significant reduction in TAT when using a molecular assay instead of the GBS Detect Plates (p-value = 0.0001 by Student T test).

Conclusions:
- Carrot Broth was validated as the enrichment step for detection of GBS on the BD MAX, with no significant difference in performance vs. the use of LIM Broth.
- GBS positivity rate in our patient population is ~34% and after molecular test implementation, no significant change in GBS positivity rate was observed.
- The average TAT for Carrot Broth positive specimens was 21 hrs.
- The use of a molecular assay instead of culture alone allowed for earlier reporting of results by 21 hrs.
- By using the Carrot Broth BD MAX algorithm, the laboratory decreased expenses by ~$1100 a month (in comparison to using LIM Broth), since the Carrot Broth positive specimens were not run on the BD MAX.
Example: Poor Background
Summary

• Designing an effective poster takes time and attention to detail.
• The little things like sizing, layout, and white space make a poster really stand out and allow your data to shine!

...now you have the tools and information to make a perfect poster for ASM Microbe