Facemasks!

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This presentation represents my personal opinions. I’ve done a lot of research and experimentation and I wanted to share it to help you get started on your own face mask odyssey.
Disclaimers

- Homemade fabric masks are not medical equipment and will not prevent you from getting coronavirus.
- Fabric masks are a tool to reduce community transmission of coronavirus, mostly protecting other people from droplets you are generating.
- As of 04-03-2020, the CDC is recommending people wear cloth face masks or face coverings in public settings where social distancing is difficult to maintain (e.g., at the grocery, pharmacy, etc).
- For this purpose, a home sewn fabric mask is preferable to using commercially made medical masks, which are in short supply.
- **NOTE:** Just because you or a family member has a mask does not mean you can stop your social distancing practices! Wearing a facemask is an additional measure to reduce virus transmission.

Goals for Facemask Production

- Meets the criteria of the intended user (medical/paramedical vs personal)
- Comfortable to wear
- Adjustable fit
- Adjustable nose fit
- Achieves good coverage of nose and mouth
- Washable/Durable
- Uses readily available materials
- Easy to make
Notes on Materials

- **Fabrics**: Quilting cottons, flannel (+), old sheets, pillowcases (prewash everything)
- **Filter layers**: nonwoven interfacing, batting, paper towels, shop towels, extra layer of fabric (efficacy has not been proven for any of these)
- **Elastic vs Fabric ties**: Strong preference for fabric or t-shirt yarn ties. Elastic loops often uncomfortable, rub ears, not necessarily as durable as desired.
- **Nose “clip”**: some kind of easily bendable wire that can be washed and dried repeatedly. Examples: Plastic coated garden wire or electrical wire, stainless steel or aluminum wire, flat aluminum wire. Each mask requires a piece about 3.5” long. Cut up disposable aluminum pie plates or pans may also work. AVOID pipe cleaners or paper coated twist ties, despite what you may have seen online (unless you make them removable).

Choosing a Pattern

- There are literally hundreds of patterns, tutorials, and videos now available online
- The ones I’m about to show you represent what I consider the best of the ones I’ve tested and viewed, but there are many other excellent patterns available
- As quilters, we are in the fortunate position of having the materials and tools and knowledge to make effective masks for our families, friends, neighbors, and strangers.
- My mission tonight is to help you by sharing my research and experience
- In the end, the best pattern for you is the one you can make and your recipients will wear!
Pleated Mask (Multiple Patterns)

- Fit is usually pretty poor unless you tweak pattern (simplest fix is to add an adjustable nose wire and a small dart in the center of the bottom)
- Most don’t include a channel for an adjustable nose wire (but you can add one to any pattern)
- May/may not include a filter pocket
- Pattern directions: range from excellent to awful
- Sewing Level: generally easy

The Versatile Face Mask (The Crafty Quilter/ CraftPassion/The Fabric Patch)

- Excellent fit and coverage (Fabric Patch variation now has multiple sizes, based on facial measurements)-see next slide
- Pocket for optional filter
- Pattern directions: excellent
- Sewing Skill Level: easy intermediate. Very straightforward to sew and directions are well-illustrated
- I strongly prefer the Fabric Patch version (next slide) because it fits better and has more room between your nose/mouth and the mask (less claustrophobic)
Custom Fit Face Mask (The Fabric Patch-Cindi Rang/Jesse Killion)

- Better fit and coverage (multiple sizes [18], based on facial measurements). No filter pocket.
- Top edge of mask is lower, so glasses don’t fog up
- Pattern directions: Video tutorial with good info on fitting, options for ties and ear loops
- Sewing Skill Level: Intermediate.
- This mask is now my favorite because it fits better overall, has more room between your nose/mouth and the mask (less claustrophobic) and doesn’t fog my glasses!

The Versatile Face Mask-Simplified (Tom Bihn Version)

- Good fit and coverage (based on one facial measurement), sizing runs a bit small. No filter pocket.
- Elastic or t-shirt yarn works for ear loops. Can add a casing for halter-style ties if you prefer that style
- FAST to make- novel construction method
- Pattern/video directions: Pretty good
- Sewing Skill Level: easy intermediate.
- Great mask to make in quantity; has same fabric front and back due to construction method
- My first mask took 15 minutes from fabric selection to finish. Stitching takes ~5 min. Easy to make in bulk.
The A.B. Mask by Jessica Nandino, RN

- Excellent fit and coverage (make a test version- I found that I wanted it a bit wider [1/2"] across the mask for the best fit)
- Pocket for optional filter
- Pattern directions: average
- Sewing Skill level: intermediate. Not especially hard, but a bit fussy (if you have made anything with a bound edge, you'll be fine)
- This can easily be adapted to the t-shirt "halter-style" tie, requiring the user to tie only one tie.

Simple Mask (Orange Dot Quilts)

- Excellent fit and coverage (and the only one I tried that works well for men with beards)
- Design effectively builds a filter layer in (she uses batting, I prefer fusible nonwoven interfacing)
- Pattern directions: hard to figure out the first time through, kind of origami-like design
- Sewing Skill Level: Easy. Once you've figured it out, this is actually the fastest mask to make because it has the least sewing
Making Ties

- "T-shirt yarn": see next slide
- Twill tape or grosgrain ribbon, ½" wide or less
- Fabric Ties (time consuming, but work well)
  - Make with straight of grain not bias cuts
  - My preference: cut WOF 1 ¾" or 2" wide, yielding either 3/8" or ½" ties. 2 WOF strips needed per mask
- Making your ties easily: Bias tape maker, Sasher tool, slanted pins hack

Favorite Material for Ties: T-Shirt “Yarn”

- Cut ¾-1” strips from an old t-shirt (preferably with no side seams)
- Pull to stretch until strip curls into a fat “yarn”
  - Heavily overprinted areas won’t curl as well (I discard those parts)
- For “halter-style” ties, you will want a 50-55” length
- For standard ties, cut into 16” lengths
- No old t-shirts? Try old yoga leggings, t-shirt knit or lycra/spandex yardage (I find lycra/spandex works better when cut thinner- ½” was the sweet spot for my scraps.)
Halter-Style Ties

- One tie instead of two—much easier for wearer
- Can adapt to work on almost any pattern
- To add:
  - Make mask body
  - Add a casing on each side edge
  - Stitch casing closed with t-shirt yarn (50-55”) already in it (being careful not to catch yarn in stitching)
  - Tie knot at ends of yarn
- Loop goes behind neck, adjust mask on face, pull yarn through casings to adjust fit, tie at back of head

Adjustable wires for nose clips

- Wire needs to be able to be easily bent while still holding a shape, and washable
- If your wire is really thin, double it
- I cut 3.5 - 4”, then crimp a scant ¼” at each end
- Another option: Cut a ¼” x 4” piece from a disposable aluminum pan (be careful of sharp edges—may make mask less durable)
- Plastic-covered paper clips (unbent) also work
- Pipe cleaners or twist ties can work if you make them removable (for laundering the mask)
Filter Layers: Does Your Mask Need One?

- Probably not, in most cases
- Remember, your mask is primarily to trap aerosol droplets coming out of your nose and mouth. Sadly, it is not able or intended to protect you from the virus entering your respiratory tract.
- Finally, there is a halfway decent study testing potential mask and filter materials
  - A volunteer group in Michigan made 20 different mask combinations and they were tested by TSI, the company that develops the equipment to test N95 masks for fit and efficacy
  - Beware: Some of the materials they tested are probably not safe to breathe through
  - Bottom line: Most of the materials we use in masks are not going to be very effective at blocking viral particles. One specialty material, Filti, is reasonably good, but has relatively low breathability
- https://www.maskfaq.com/
- My thoughts at this point: Unless you are very high risk for infection, a filter layer isn’t very important

Show Your Love

- Put that stash to use!
- Pick cute fabrics for each member of your family/household
  - Themes, colors
- Desperate to feel you are doing something for the greater good?
  - Make masks for charities, homeless shelters, neighbors who don’t sew
  - Make extra masks, wash and bag them. Carry with you to give to retail workers who need them.
  - There are multiple groups serving as hubs to match requests from organizations with sewists who want to help
  - Be sure you know the requesting organization’s mask requirements — some want specific patterns used
Links to Patterns (new ones in yellow)

- The Fabric Patch/Jesse Killion fitted mask
  https://www.youtube.com/watch?v=pbqkLcPHhcQ
- Tom Bihn Facemask
  https://www.tombihn.com/blogs/main/maskhowto
- Bonnie Hunter (Halter Style Ties at 15:00 min):
  https://www.youtube.com/watch?v=sclHEc9z7Ew
- Simple Pleated Facemask (Sewing Seeds of Love)
  https://www.youtube.com/watch?v=9QrW4zjlMwY
- Pleated Face Mask with knit ties (Jan Howell- Make It Simple)
  https://www.youtube.com/watch?v=2UejCpjfbn8
- The Crafty Quilter
- AB Mask
- Orange Dot Quilts
  https://www.orangedotquilts.com/simplemask/simple-mask

Donating Masks

- Masks Now Coalition
  https://masksnow.org/
- Million Mask Challenge
  https://millionmaskchallenge.com/
- Relief Crafters of America- join their Facebook group for details
- Deaconess Hospital System
  https://www.deaconess.com/How-to-make-a-Face-Mask
- Many other groups are also organizing. If you want to make masks for others there are lots of options.
Resources

- Masks4all movement  https://masks4all.org/
- The Fabric Patch videos: Excellent explanations about materials, construction hints. Note that their original focus was on use for by medical personnel - 4th video is more current
  - https://www.youtube.com/watch?v=fySsaOojEVM
  - https://www.youtube.com/watch?v=v8HNYKvLaN8
  - https://www.youtube.com/watch?v=NnSl3J7j0_E
  - https://www.youtube.com/watch?v=N4t8nwDuxY&list=PLNFTkL4NckwuGQqjFK875rSKU-2GjCox&index=17&t=1389S
- Article on particle penetration through different materials