



FlexiPort Training

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Activity

- 1) Break Into (3) Groups
- 2) Put Answers on Each White Board
 - a) What Questions Do You Typically Get About Cuffs?
 - b) What Problems Have Your Customers Had with Cuffs?
 - c) What are your biggest challenges with cuffs?
- 3) Summary of Answers





What is FlexiPort?

- New Cuff Port Allowing
 - Tubes to be attached & removed from Cuff
 - One and Two Tube Capability
- Definitions
 - FlexiPort – The part that is built into cuff
 - FlexiPort Fittings – The part that is removable
 - Single Tube – One tube version
 - Double Tube – Two tube version



How Does it Work?

- Removing Tubing
 - Squeeze sides of fittings
 - Pull



- Attaching Tubing
 - Push fitting into port until it clicks
 - Do not need to squeeze sides



What is the Big Deal?

- Patented Design
- Patented Concept
- Differentiation
- Benefits All Stakeholders!
 - Nurses
 - Biomedical
 - Purchasing
 - Infection Control/Safety Departments

How Can FlexiPort Cuffs Be Purchased?

- Fully Configured – With Tubes and Connectors Attached

Advantage

Use just like current cuffs on market.
Customer does not need to change anything
Provides another connection point

Disadvantage:

Another Connection Point (confusion and lost parts)
FlexiPort may not get used

- Raw Cuffs – No Tubes or Connectors

Advantage

Reduces variability (tubing and connectors)
60% part number reduction!
One Standard Connection Point



What Are The Part Numbers?

Welch Allyn FlexiPort Cuffs

STYLE	
Description	1ST SECTION
Soft Disposable	SOFT
Vinyl Disposable	VINYL
Durable	REUSE

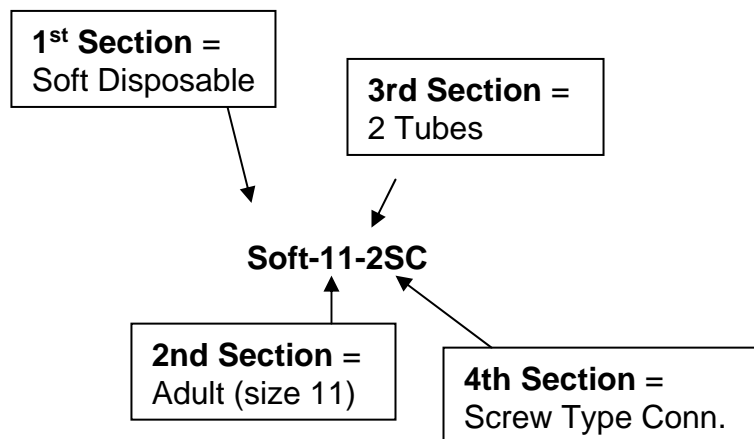
DASH	SIZE	
	Description	2ND SECTION
-	Sm. Infant ¹	6
-	Infant	7
-	Small Child	8
	Child	9
	Small Adult	10
	Adult	11
	Adult Long	11L
	Large Adult	12
	Large Adult Long	12L
	Thigh	13

DASH	NUMBER OF TUBES	
	Description	3RD SECTION
-	1 Tube	1
-	2 Tube	2
-	Blank Cuff	

CONNECTOR/FITTINGS	
Description	4TH SECTION
Screw	SC
Bayonet ¹	HP
Tri-Purpose ²	TP
Locking	MQ
Locking (Mated) ³	MF
INFLATION SYSTEM	BV

- 1- Only Available in One-Tube Configurations
- 2 - Not Available in Vinyl Disposable Cuffs
- 3 - Male and Female Connectors (Two-Tube Only)

Example:



Cardinal BP Cuff Numbers

- Soft 30502 series change to 30503
 - Example 30502-013 changes to 30503-013
- Vinyl 30505 series change to 30506
 - Example 30505-009S changes to 30506-009S
- Raw cuffs:

Size	Soft	Vinyl
Small Infant	30503-09	-
Infant	30503-10	30506-10
Small Child	30503-19	30506-19
Child	30503-11	30506-11
Small Adult	30503-12	30506-12
Adult	30503-13	30506-13
Adult Long	30503-13L	30506-13L
Large Adult	30503-14	30506-14
Large Adult Long	30503-14L	30506-14L
Thigh	30503-15	30506-15


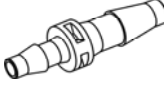
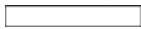




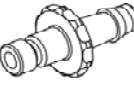




Note: The number logic does not match Welch Allyn's

Quiz

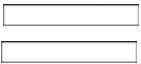

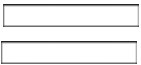

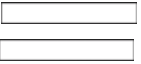

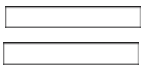





- What is the Welch Allyn part number for:
 - A reusable one-tube adult cuff with a bayonet connector?
 - A disposable two-tube child cuff with screw-type connectors?
 - A reusable Cuff for Two Tube Aneroids thigh size (with bulb and valve)?
 - A small adult disposable cuff without tubes (raw cuff)?





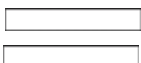





What about Tubing Accessory Part Numbers?

	Part Number	Tubes	Fitting(s)	Unit of Measure	Description
One Tube	1-BARB			10	BP PORT FITTING,1-TUBE,BARBS
	1-SC			10	BP PORT FITTING,1-TUBE,SCREW
	1-MQ			10	BP PORT FITTING,1-TUBE,LOCKING
	1-HP			10	BP PORT FITTING,1-TUBE,BAYONET
	1-TPSE			10	BP PORT FITTING,1-TB,SM EURO
	1-TPLE			10	BP PORT FITTING,1-TB,LG EURO

What about Tubing Accessory Part Numbers?



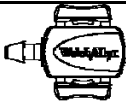
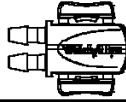

Part Number	Tubes	Fitting(s)	Unit of Measure	Description
2-BARB			10	BP PORT FITTING,2-TUBES,BARBS
2-SC			10	BP PORT FITTING,2-TUBE,SCREW
2-MQ			10	BP PORT FITTING,2-TUBE,LOCKING
2-MF			10	BP PORT FITTING, 2 TB,M/F LOCK
2-TPLE			10	BP PORT FITTING,2-TB,SM EURO
2-TPSE			10	BP PORT FITTING,2-TB,SM EURO

What about Tubing Accessory Part Numbers?

Part Number	Tubes	Fitting(s)	Unit of Measure	Description
2-BVL			10	BP PORT FITTING,2-TUBE, LG BULB
2-BVS			10	BP PORT FITTING,2-TUBE, SM BULB
2-BVD			10	BP PORT FITTING,2TUBE,ECON BLB
1DSAL			1	ADAPTER,DS45 W/ LG BULB
1DSAS			1	ADAPTER, DS45 WITH SMALL BULB
1DSLCL			1	ADAPTER, DS44 WITH ECONO BULB

Two Tube with Bulb

What about Tubing Accessory Part Numbers?

	Part Number	Tubes	Fitting(s)	Unit of Measure	Description
Other Components	5082-188			10	FLEXIPOINT TUBING, 8", 10/PK
	5082-189			10	FLEXIPOINT TUBING, 13", 10/PK
	PORT-1			10	BP FLEXIPOINT FITTING, 1-TUBE
	PORT-2			10	BP FLEXIPOINT FITTING, 2-TUBE
	5082-159			1	CAP, FLEXIPOINT BP CUFF

What Cuffs Have FlexiPorts?

- All Welch Allyn non-neonatal One-Piece Cuffs
 - Reusable/Durable One-Piece
 - Disposable
 - DuraShock Cuffs



What Cuffs Do Not Have FlexiPorts?

- Two-Piece Cuffs
- Neonatal Cuffs
 - Too Small
 - Already 99% standardized to luer slip
 - Do not want accidental connection to Adult Mode Monitors

What Devices will Ship with FlexiPort Cuffs?

Device	FlexiPort?
Spot	Yes (Where Possible)
Spot Lxi	Yes (Where Possible)
VSM	Yes (All Version)
Atlas	Yes (All Version)
Propaq LT	Yes (All Version)
Propaq CS	Yes (All Version)
PIC 50	Yes (All Version)
Wall Aneroids	Yes (except CB's)
DuraShock Aneroids	Yes (except CB's)

Quiz

- What Cuffs Have FlexiPort:
 - a.) neonatal cuffs
 - b.) two-piece cuffs
 - c.) all non-neonatal one-piece cuffs



What's New? - Reusable

- Cuff Shape
 - Rounded Corners
 - Folded Edge
- Materials
 - Color Coded
 - Matte Finish
- Antimicrobial (Still There)
- Printed Part Numbers
- Velcro
 - Only Shape has Changed
- Upside Down Orientation
- Only Sold as Eaches (1 per pack)



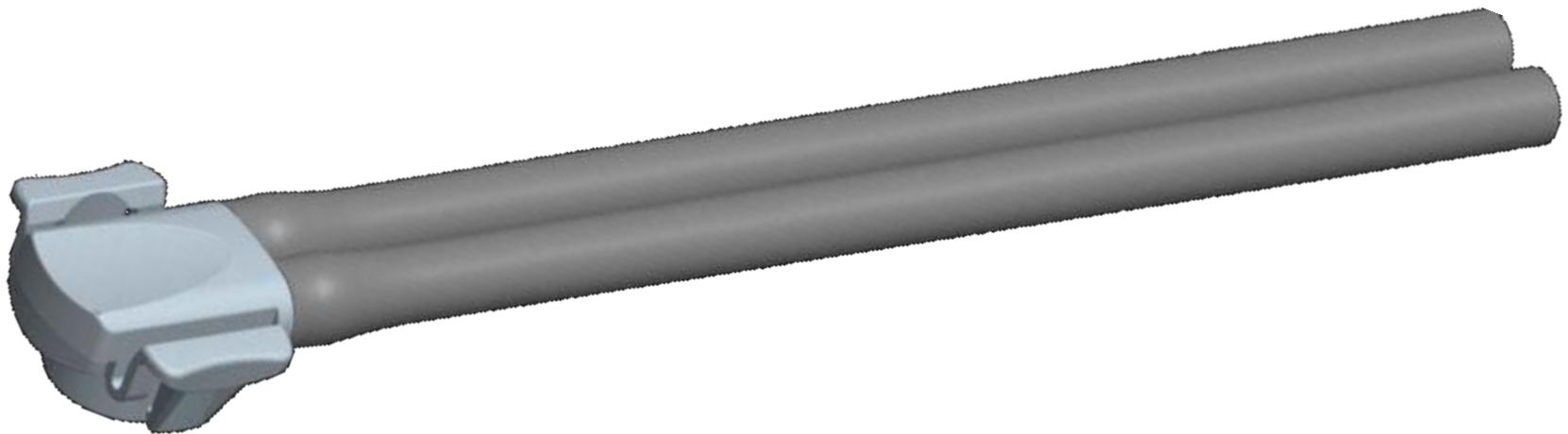
What's New? - Disposable

- Same Soft Material
- Same Shape
- Upside Down Orientation
- 20 Per Case (non-neo)



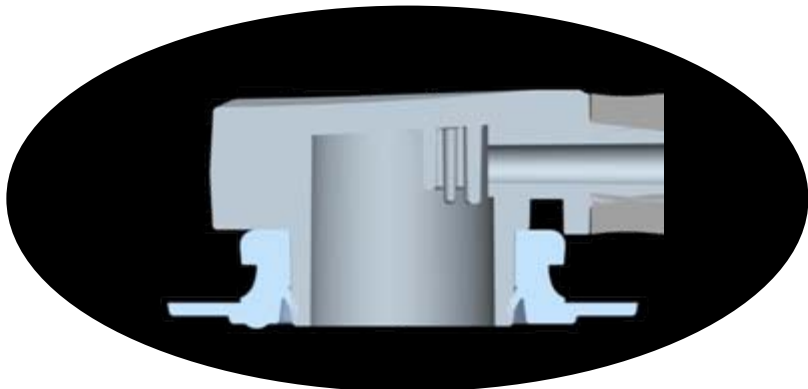
What's New? - Tubing

- Similar Material
- Outer Dimension (OD) is Smaller
- One Style/Color for Disposable and Reusable



What's New? – FlexiPort (Port)

- Two-Shot material
 - Hard Material
 - Maintains Shape
 - Very Durable
 - Soft Material
 - Welds Well to Cuff
 - Very Pliable
 - Forms O-ring Seal
- Round Design
- Rotatable Feature
 - Stress Relief
 - Improves patient comfort (tubes out of way)



On and Off



What's New? – FlexiPort Fitting

- One and Two tube Versions
- Particle Filters
 - Nose Hair Effect
 - Trap lint and debris
- Air Separation
 - Keeps Air Channels Separated (2 Tube Devices)
- Over-Squeeze Protection
 - Prevents Arms from Breaking



Why it Works!



What Else is New? - General

- Backwards Cuff
- Rounded Range Sizes
 - Easier to Remember
 - Cuff Dimensions Do Not Change
 - Intended Range Does Not Change
- Wash/Debris Cap
 - For laundering
 - For keeping debris out of cuff
- Better Date Code
 - New Location
 - Better Stamping
 - No More Code



Features and Benefits

Feature	Benefit
One and Two tube Interchangeability	Reduces part numbers and inventory. * Reduces cuff cost since tubes and fittings are no longer required. *Allows one cuff to work on virtually any blood pressure device.
Quick One hand Operation of Port	Makes changing cuffs much quicker and easier
Color Coding by Size	Allows for quick visual identification of cuff size
Rotatable Port	Reduces stress to cuff tubing and port. *Improves patient comfort.
Easy to Learn Part Number Logic	Decreases confusion while re-ordering
Part numbers on cuff	Decreases confusion while re-ordering
Latex Free	Improves Safety
Meets AAMI and AHA Clinical Guidelines for Proper Fit	Helps Ensure Accuracy
Validated on Leading Blood Pressure Monitors	Helps Ensure Accuracy
No Sewn Seams	Won't Tear or Fray
Use High Quality Velcro Branded Closure	Maximizes Cuff Cycle life
Rolled/Folded Edge (Reusable Only)	Improves patient comfort
Antibacterial Coating (Reusable Only)	Helps prevent the growth of mildew and bacteria
3-Year Warranty (Reusable Only)	Reduces replacement costs due to premature failures

Competition

REUSABLE CUFFS					
	Welch Allyn	Critikon	Trimline	Technicuff	Philips
Location of Manufacturing	Mexico	Mexico	United States	USA	(Netherlands)
Warranty	3-Year	30-Days	2-Year	6 Month	1- Year
Construction	One-Piece	One-Piece	One-Piece	Two-Piece	Two-Piece and One Piece Available
Color Coded	Yes (Primary sizes)	Yes	Yes	No	Yes - Some Models
Antimicrobial Material	Yes	No	Yes	No	Yes - Some Models
FlexiPort (ability to change from one to to t	Yes	No	No	No	No
AAMI Specifications	Yes	Yes	Yes	No-Uses 360° Bladder	Yes
Validation with Current Monitors	Yes	No (old study only)	No	No	No
Folded Edge	Yes	Yes	Yes	Yes	Yes
Sewing that can fray	No Sewn Seams	Yes	Yes	Yes	Yes
Latex Free	Yes	Yes	Yes	Yes	Yes
How to Sell Against		No FlexiPort! Warranty, Lack of Antimicrobial	No FlexiPort! Warranty, Validation Studies	No FlexiPort! Two Piece Construction, Warranty, AAMI compliance, Odd Tubing Configurations	No FlexiPort! Two-Piece Construction on some cuffs, Warranty, Often Expensive
DISPOSABLE CUFFS					
	Welch Allyn	Critikon	Trimline	Vital Signs	Phillips
Location of Manufacturing	USA & Mexico	Mexico	United States	Unknown	(Netherlands)
Material	Sontara (Soft) or Vinyl	Soft & Vinyl	Soft & Vinyl	Canvas-like	
Color Coded	Yes (Welch Allyn Branded)	Yes	Yes	Yes	Yes
FlexiPort (ability to change from one to to t	Yes	No	No	No	No
AAMI Specifications	Yes	Yes	Yes		
Validation with Current Monitors	Yes	No (old study only)	No	No	No (cites most NIBP monitors)
Latex Free	Yes	Yes	Yes	Yes	Yes

Quiz

- What are the following parts called?

The part that is build in the cuff?

The Piece that snaps into the cuff?



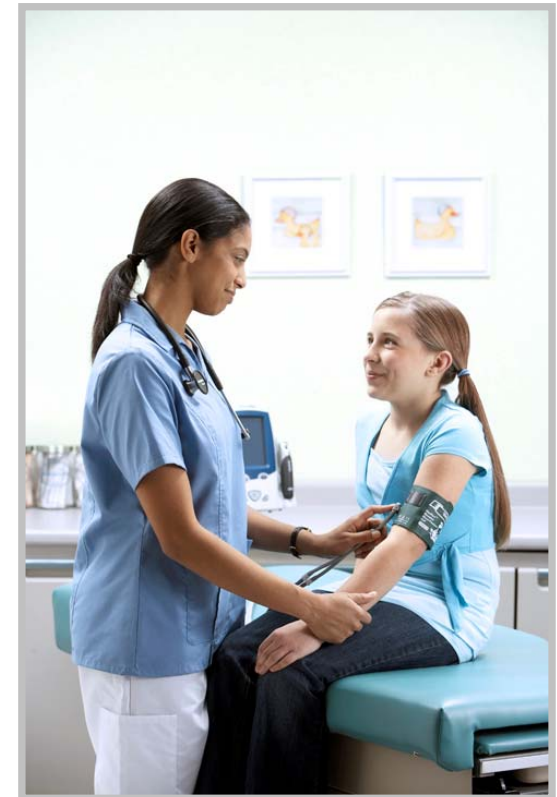
Pricing

- List and Dealer Pricing
 - Same as previous cuffs (at each level)
- Details and Accessory Pricing to Follow!



Accuracy Testing - Clinical

- **Welch Allyn Device Testing** – Tested to ensure FlexiPort cuffs were accurate on all electronic Welch Allyn blood pressure devices.
- **Competitive Device Testing** – Tested FlexiPort cuffs on competitor's electronic blood pressure devices compared to the cuffs the manufacturer ships with the devices.
- **Cuff Functional Equivalent Testing** – Compared the FlexiPort cuffs to Welch Allyn and other manufactures blood pressure cuffs on varying blood pressure devices to show FlexiPort cuffs performed statistically equivalently to both one and two tube cuffs.



Accuracy Testing - Laboratory

- **Signal to Noise Analysis** – Compared the airflow and signal characteristics FlexiPort cuffs to ensure two tube FlexiPort cuffs did not interfere with blood pressure readings.
- **Signal Strength and Frequency Response**
- **AAMI Dimensional Review** – Measured cuff range and bladder dimensions to verify compliance to AHA and AAMI SP10 2002 guidelines.
- **AAMI Leak Test** – Verified that FlexiPort cuffs met the leak rate specifications outlined in AAMI SP10 2002.



Clinical Studies

Study	Purpose	Method	Measurement	Results
Small Hospital	Determine User Acceptance of FlexiPort Concept in a Small Hospital Setting	Converted to FlexiPort cuffs forcing practitioners to connect and disconnect cuffs using the FlexiPort fitting.	Surveys and focus groups were conducted.	Users preferred FlexiPort Cuffs to the Cuffs they previously used.
Large Hospital	Determine User Acceptance of FlexiPort Concept in a Large Hospital Setting	Converted to FlexiPort cuffs forcing practitioners to connect and disconnect cuffs using the FlexiPort fitting	Surveys and focus groups were conducted.	Users preferred FlexiPort Cuffs to the Cuffs they previously used.
Physician's Office	Determine user acceptance of FlexiPort Blood Pressure Cuffs in physician office settings	Practitioners equipped all blood pressure devices with FlexiPort fittings and used these fitting as the primary means of connection during the study.	Surveys and Focus groups were conducted	practitioners preferred FlexiPort cuffs compared to their normal BP cuffs.
Germany Study	Determine User Acceptance of FlexiPort Concept in a Large Hospital Setting	Converted a large hospital to FlexiPort cuffs forcing practitioners to connect and disconnect cuffs using the FlexiPort fitting.	Surveys and focus groups were conducted.	Users preferred FlexiPort Cuffs to the Cuffs they previously used.
Emergency Department	Verify Cuffs are intuitive and easy to use in a fast paced hospital environment	Phase I, FlexiPort Cuffs were introduced into a busy ED setting without practitioner training or explanation of the new cuffs. Phase II of this study, the ED was fully converted to FlexiPort cuffs and practitioners were trained.	Phase I: Observation by Welch Allyn Employees. Phase II Surveys and Focus Groups	Users intuitively figured out how to use the cuffs and patient care was not interrupted. Practitioners liked the FlexiPort cuffs more than the cuffs they normally used.
Children's Hospital	Determine effectiveness of the FlexiPort Blood Pressure Cuffs in pediatric hospital settings	Converted a busy children's hospital to FlexiPort cuffs.	Surveys and Focus Groups	Practitioners liked the FlexiPort cuffs better than the cuffs they regularly used.
Observational	Verify the FlexiPort Blood Pressure Cuffs are intuitive and easy to use.	Asked nurses to attach and remove FlexiPort cuffs and take blood pressure readings without prior product training.	Observation, Surveys, and Focus Groups	FlexiPort was intuitive, easy to use and desirable.

Durability!



Durability Testing

- **Military Environmental Testing**
- **Velcro Life** – Simulated 3 year life
- **Normal Tube Pull** – Cuff tubing is pulled and rotated over 100,000 times for reusable cuffs to ensure strength and durability under rigorous use situations.
- **Excessive Tube Pull** – Extreme tube pull in multiple directions and angles to simulate misuse.
- **Inflation Cycle** – Inflating and Deflating Cuff over 100,000 cycles and checking for leaks.
- **Port On/Off Cycle** – Port in inserted and removed from the FlexiPort Cuff thousands of times to simulate highest use environment. The port must not leak and must stay attached when extreme force is applied to port at the conclusion of the test.
- **Port Rotation** – Port Fitting is rotated thousands of times to ensure the airtight seal is maintained.
- **Printed Image** – Verifies that the cuff printing has good adhesion to the fabric and the image has good sharpness, color contrast and opaqueness.
- **Drop Testing** – Cuffs are dropped from various heights to ensure no damage is done during normal use.

Additional Testing

- DuraShock
- EMS
- Nursing Home
- Cleaning
 - Wipe Test
 - Soak Test
 - Laundering Test
 - EtO Testing
- Environmental Testing
 - Operating Temp Test
 - Shipping Test
 - Storage Test
- Biocompatibility

Product Literature

- Brochures
 - Disposable
 - Reusable
- Interactive CD
- Point of Sale Tool Kit
- Launch Binder
- Distributor Notification
- Customer Notification



Frequently Asked Questions

- How can hospitals use FlexiPort Cuffs?
- How can a hospital save money using the FlexiPort?
- Why do some patients bruise when they have their blood pressure taken?
- How long will the Antimicrobial last on the reusable cuffs?
- What are the cuff ranges?
- How are the cuff dimensions and ranges established?
- Why do the long cuffs have the same range as the non-long versions?
- Do the FlexiPort cuffs meet AAMI and AHA specifications?
- How do you apply the cuff correctly?
- Why are there no newborn FlexiPort cuffs?
- Why don't the neonatal cuffs have the FlexiPort?
- Why is the FlexiPort cuff different to apply than other blood pressure cuffs?
- Why are my left and right arm systolic blood pressure readings often different?
- What are the long cuffs used for?
- How can you take blood pressure readings on bariatric patients?
- What is the difference between single patient use and disposable cuffs?
- Can disposable cuffs be reprocessed?
- Do the FlexiPort cuffs contain latex?
- Do the cuffs contain DEHP?
- How do you know the FlexiPort cuff materials are safe?
- How can you use on cuff on one- and two- tube devices?
- What are the risks associated with Luer Lock connections?
- What can be done to prevent accidental disconnection of luer fittings?
- What Welch Allyn Blood Pressure Devices use Luer Lock connectors?
- What does Welch Allyn do to make sure the cuffs last?
- What is the warranty on the cuffs?
- How can you tell when the cuff was made?
- What does the term "One-Piece" Cuff refer to?
- How can the cuffs be cleaned?
- Why use disposable cuffs?
- Are the FlexiPort Cuffs Color Coded by Size?
- What are the little molded spikes on the underside of the FlexiPort Fitting?
- How do I prevent dirt and debris from entering the FlexiPort?
- Where are FlexiPort cuffs made?
- Can the FlexiPort Tubing assemblies be ordered separately?
- How do the FlexiPort cuffs compare to the previous Welch Allyn one-piece cuffs?
- Can FlexiPort Cuffs be used in an MRI environment?

Washing Instructions



CAUTION: Examine for physical integrity after cleaning or disinfection.

Preparation (laundering and disinfection only): Remove FlexiPort fitting and tubes from the cuff, seal open port with accessory plug (REF 5082-159). Close the hook and loop.

Cleaning (Reusable cuffs, tubing, and port fittings)

Use one or more of the following methods and allow to air dry:

- Wipe with mild detergent and water solution (1:9 solution). Rinse.
- Wipe with Enzol per manufacturer's instructions. Rinse.
- Wipe with 0.5% bleach and water solution. Rinse.
- Wipe with 70% isopropyl alcohol.
- Launder with mild detergent in warm water (60 °C max), normal wash cycle. Cuff is compatible with 5 wash cycles (Reusable only).

Disinfection (Reusable cuffs only)

Use CIDEX disinfectant. Follow the manufacturer's instructions for high-level disinfection to achieve at least low-level disinfection.

Activity

- Form into your groups
- Explain how the FlexiPort addresses your original issues.

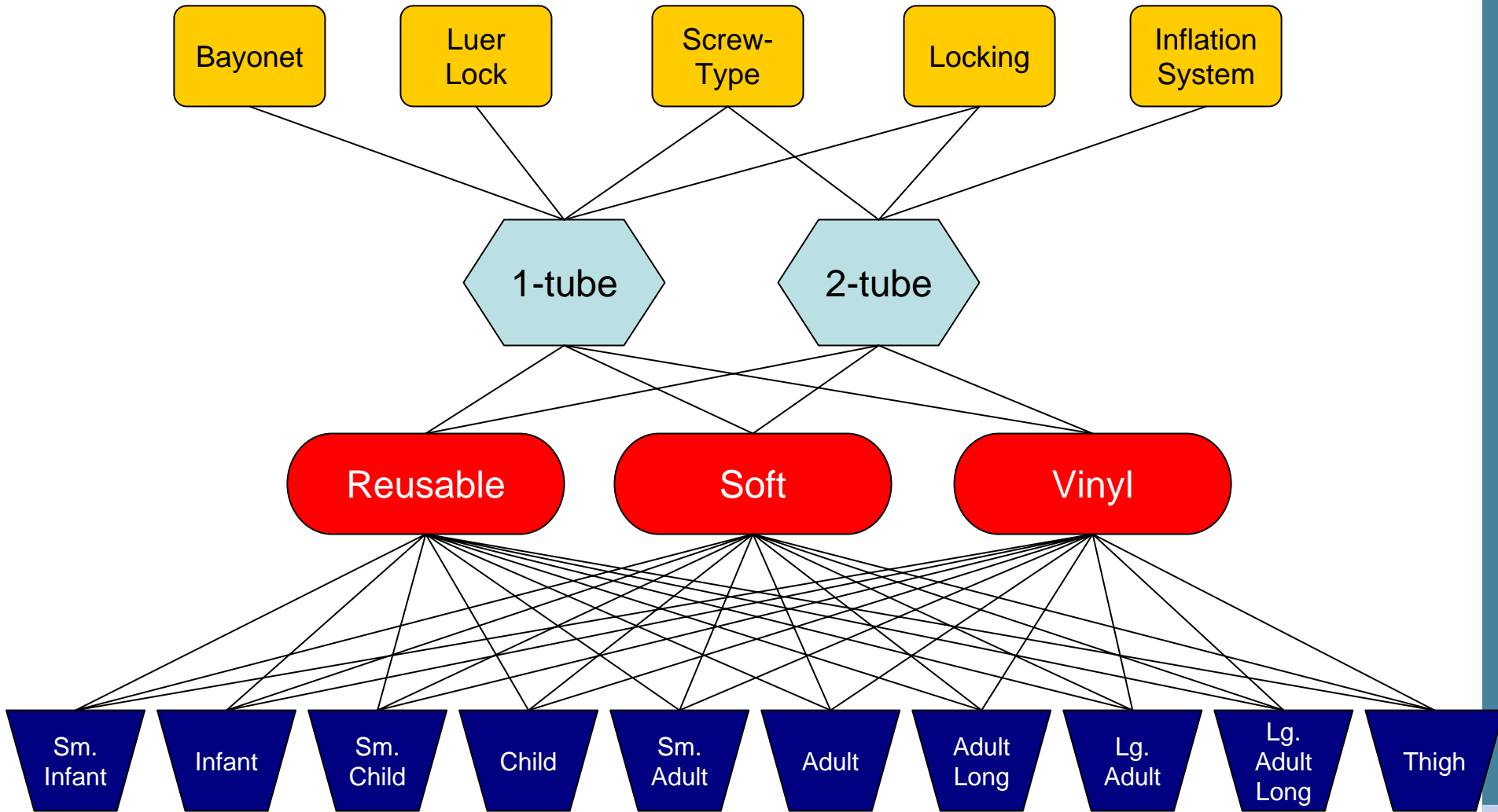




True Standardization

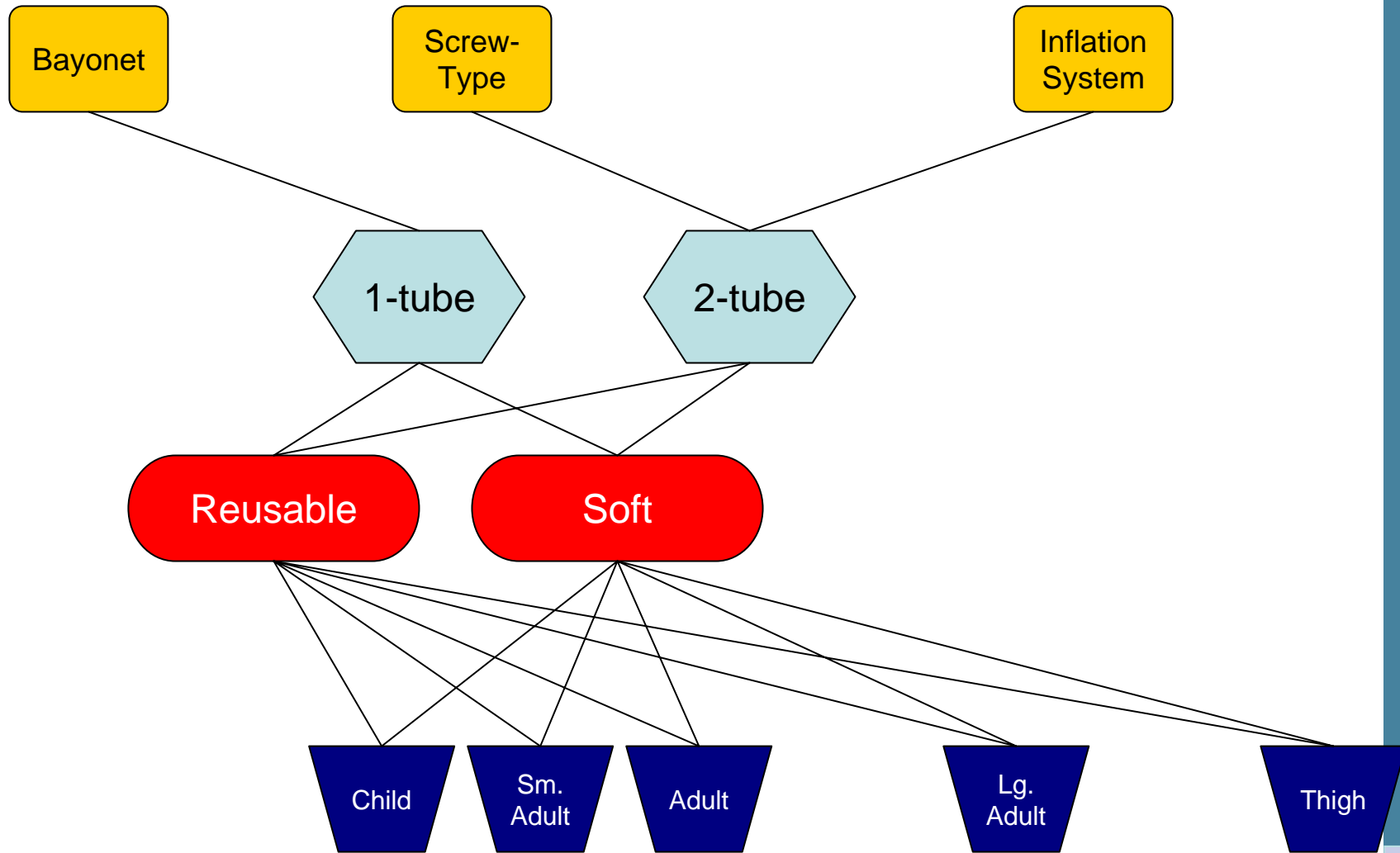
FlexiPort Training Section II

Current Cuff Market Variety



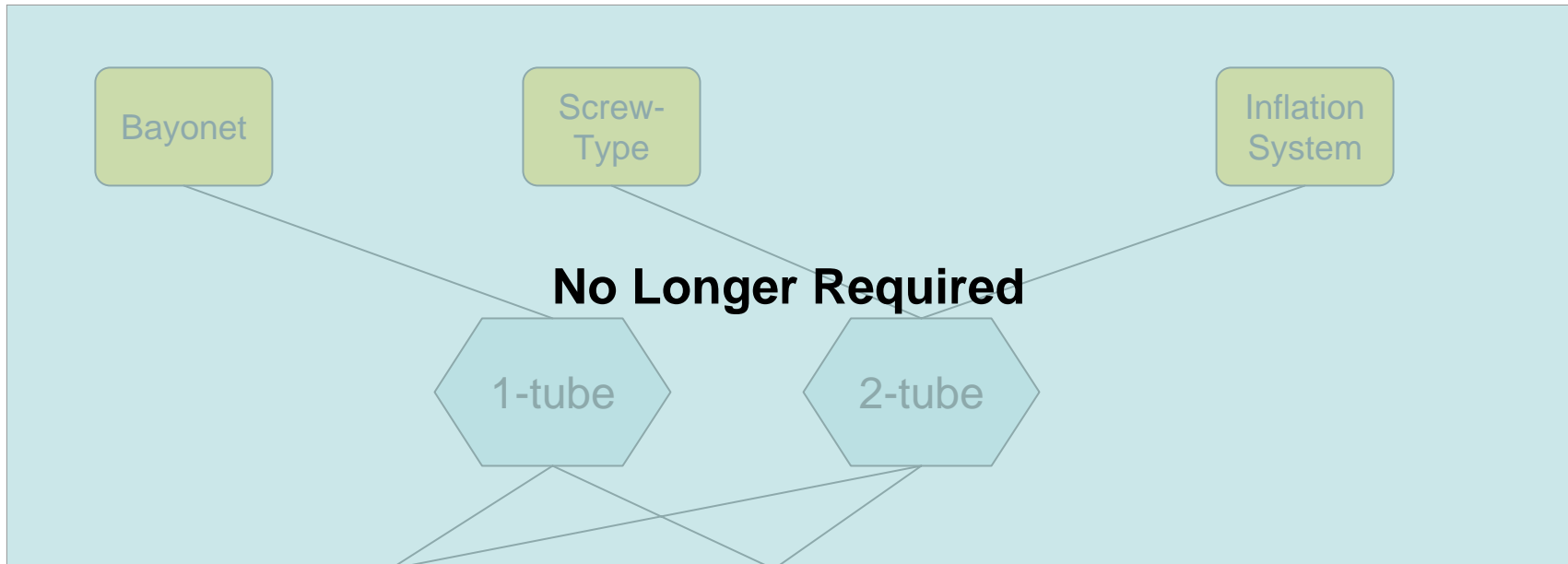
201 Cuff Versions!

Typical Hospital Variety



30 Cuff Versions!

Typical FlexiPort Variety



Reusable

Soft

Child

Sm.
Adult

Adult

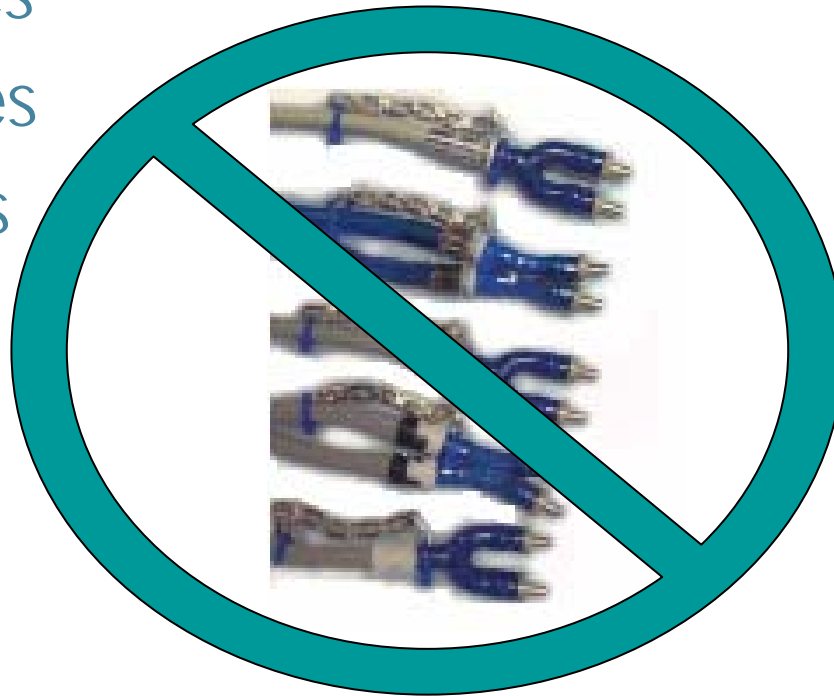
Lg.
Adult

Thigh

10 Cuff Versions!

What is True Standardization?

- FlexiPort was designed to Allow Standardization
- Eliminated Need for Crude Tubing Modification
 - Y-Tubes
 - H-Tubes
 - Clamps



What Options Does an Account Have?

Option	Explanation	How Cuff is Connected	Benefit	Disadvantage
Fully Configured	Customers buy fully configured cuffs with tubes attached	Using the standard fittings at the end of the cuff tube	Easy Transition since very little change is required	Does not reduce inventory or cost significantly
Start with Fully Configured & Transition to Raw Cuffs	Customers buy fully configured cuffs (with tubes attached) to get the FlexiPort cuffs in inventory and in use at hospital, but then they buy Raw cuff replacements	Can be connected at the FlexiPort on the cuff or at the traditional cuff tubing connectors	Can be a good first step to transition customers to the Raw cuff concept	May be confusing having two connection points. Practitioners could loose tubing since it can be removed from the cuff and device simultaneously.
Raw Cuffs	All blood pressure devices at the facility are equipped with FlexiPort fittings (1 or 2 tube) and customer buys only Raw cuffs.	Cuff is connected using the FlexiPort, allowing the cuff to connect to all devices.	The cuff becomes universal and is the only <u>true</u> standardization available on the market.	Requires that all devices are equipped with the FlexiPort fittings. This requires some initial effort.

Standardization Process

- Audit Every Department
 - Number of Each Type of Device
 - Determine Best (slowest) Time of Day per Department
- Make Sure Conversion is Communicated
 - During Audit
 - During Department Meetings
 - By Biomed or Purchasing
 - Flyers
- Plan to Have BioMed Support
 - Helps Get you Into All Areas
- Make Sure to Have an Inventory Plan
 - Old Cuffs
 - FlexiPort Cuffs
 - Fittings and Tube Sets
- Team
 - Who will help during the conversion (for big hospitals)?