User and Service Manual For
EggNest XR™ 2.0

Our goal at Egg Medical® is to reduce the scatter radiation exposure of physicians, nurses, technicians and others who use x-ray imaging to perform life-saving diagnostic and therapeutic procedures for patients. If you have suggestions for improvements, please contact us at www.eggmedical.com/info or write us at info@eggmedical.com.

Please see www.eggmedical.com/documents to access the most up-to-date manuals and additional information

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DESCRIPTION OF EGGNEST XR™

The EggNest XR™ is an integrated scatter radiation protection shielding system. It is designed to protect <u>ALL of the healthcare workers</u> in the procedure room from scatter radiation during medical procedures employing x-ray imaging in the range of 70-100 keV energy levels.[1] This manual describes the initial set-up and use of the EggNest XR™, the recommended care of the EggNest XR™, and resource for effective use.

The effectiveness of the EggNest XR™ in blocking scatter radiation depends on proper use of the shielding system. The set-up of x-ray procedure rooms varies. Each EggNest XR™ should be configured for the best operation in the x-ray laboratory environment in which it is used.

 *Optional shields can be designed for specific procedures to maximize healthcare staff protection. Please contact Egg Medical, Inc. for details.
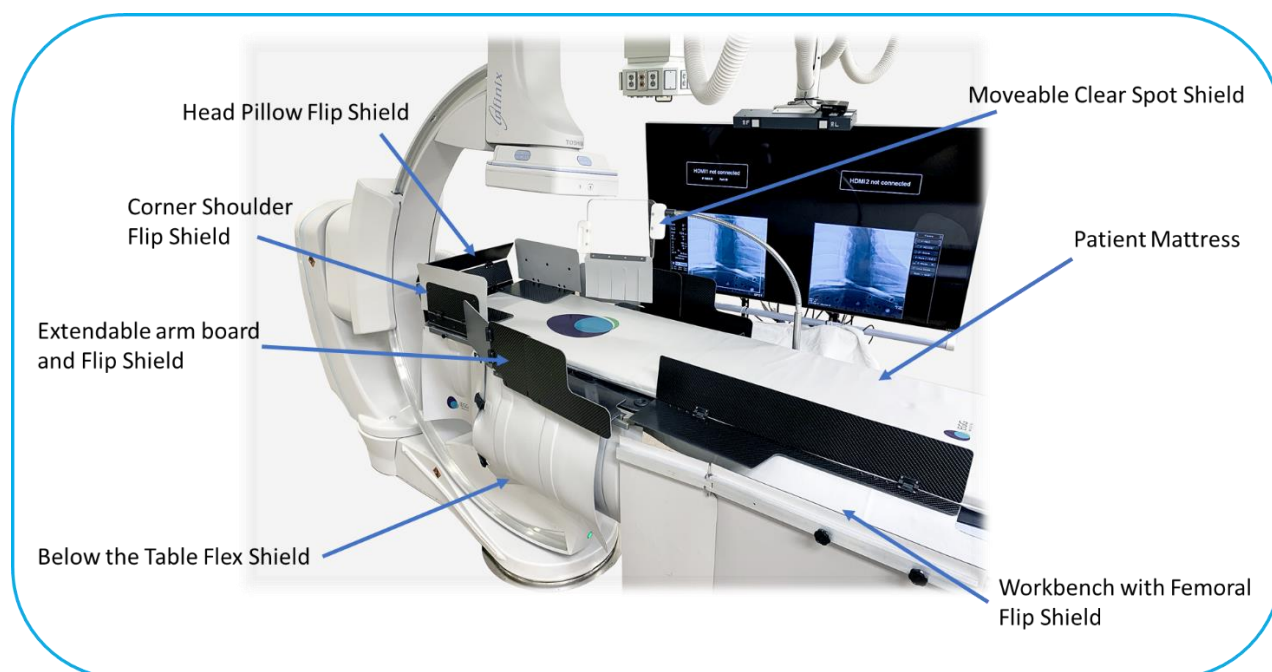

Figure 1: EggNest XR 2.0 with all of its system components to block scatter radiation

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[1] **The EggNest XR is not intended for use to protect users from radiation with energies >100 keV or radiation in the gamma range**

Carbon Fiber Base Platform Components

The **Base Platform** is a carbon fiber shell with internal radiation shielding material and quad layer memory foam insert, covered by a detachable Reflex vinyl covered foam pad. The **Base Platform** has an attached **Head Rail** around the upper half and **Left and Right Side Rails** on the lower half.
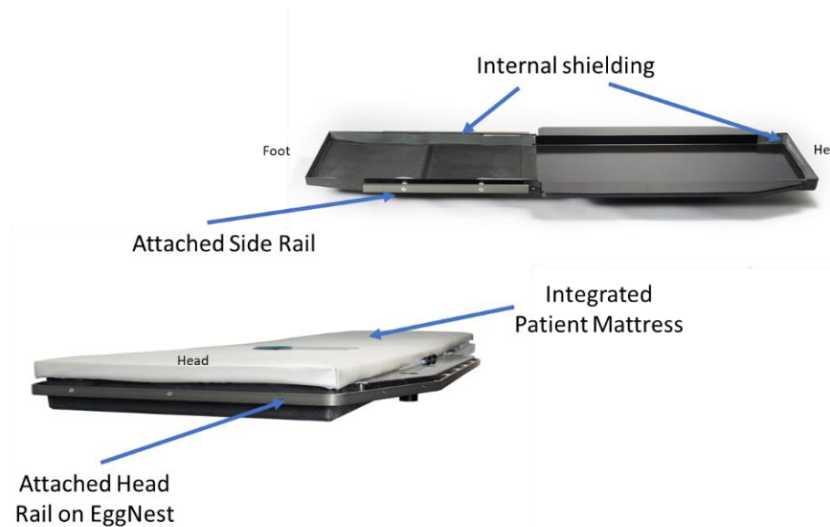
Figure 2 Carbon fiber base platform showing the internal shielding and the attached rails.

The **Base Platform** rests on the x-ray table in the place of the patient mattress. Additional components attach to the **Head Rail**, **Side Rails** and **Receiving Channels** on the **Base Platform**.

A detailed description of the components are as follows:

a. The carbon fiber shell consists of two carbon fiber pieces: an upper shell that has integrated supports for the arm boards, and a lower shell.

   I.   The two shells are joined together during the manufacturing process with two pair of screw fasteners.
   II. The **Arm Board** supports have two cylindrical **Receiving Channels** on each side. These channels receive the **Arm Board** support posts. The channels are through-holes to facilitate cleaning and their circular shape also allows rotation of accessories that are inserted.

b. The **EggNest** XR™ has a two-tier split mattress system made of vinyl that is impermeable to fluids and has an anti-bacterial coating.
c. A thin **Head Rail** is attached to the upper carbon fiber shell. The **Flex Shields** (see below) fit over and attach to the **Head Rail**.

d. The **Side Rails** attach to the lower carbon fiber shell. The **Workbench** (see below) and other items attach to the **Side Rails.**
e. Strap holders provide anchoring points for the table strap and the patient strap
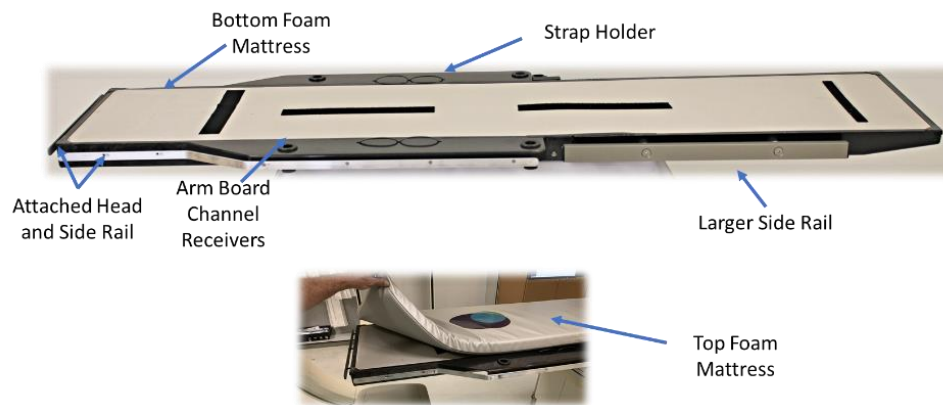
Figure 3 Shown is the carbon fiber base platform with a 2 tier split foam mattress for EggNest XR™

Arm Boards

The **EggNest** XR™ comes with **Right and Left Arm Boards**.

Arm Boards with side **Flip Shields** fit into a **Receiving Channel** and the **Base Platform.** The **Arm Boards** can be rotated outward to support the arm. The **Flip Shields** block radiation scattered from the chest. **Flip Shields** fold down for the patient loading (patient left shown).

Each **Arm Board** attaches to **Base Platform** using a cylindrical connector that fits into the **Receiving Channels** on the **Base Platform**. The body of the arm board is radiolucent to facilitate radial access imaging. The sides of the **Arm Boards** have three **Flip Shields** that flip down for patient loading and up for radiation protection during the procedure. This allows the user to adjust the shields to optimize workflow during and after the procedure.

Figure 4 Left sided carbon fiber Arm Board with Flip Shields up for radiation protection and down for patient loading.

Side and Head Flex Shields

Left and **Right Head Flex Shields** and **Side Flex Shields** attach to the **Head** and **Side Rail** on the **Base Platform**. These shields block scatter radiation from below the table at the head end of the table (patient right side shown).

Figure 5 Right Head Flex Shield and Side Flex Shields attached to the Head and side rail.

Side Flex Shields (Left and Right)

There are two **Side Flex Shields**, one right and one left. Each **Side Flex Shield** has three components:

a. A top attachment bar that fits over and attaches to the **Head Rail**. When attached to the **Base Platform**, the sliding support arm can be pulled away from the table using the handle that is on the longer arm. This will cause the **Arm Board** to move outward as well. The movement is intended to facilitate radial or brachial artery access by abducting the arm about 30°. The x-ray source can be moved under the abducted arm board in order to visualize blood vessels in the arm.

b. A larger arm of the **Side Flex Shield** is attached to the head end of the arm. The **Flex Shields** have an internal stay to give it a shape that helps prevent interaction with the x-ray tube housing and creates a center of gravity that cause the **Flex Shields** to passively swing under the x-ray table.
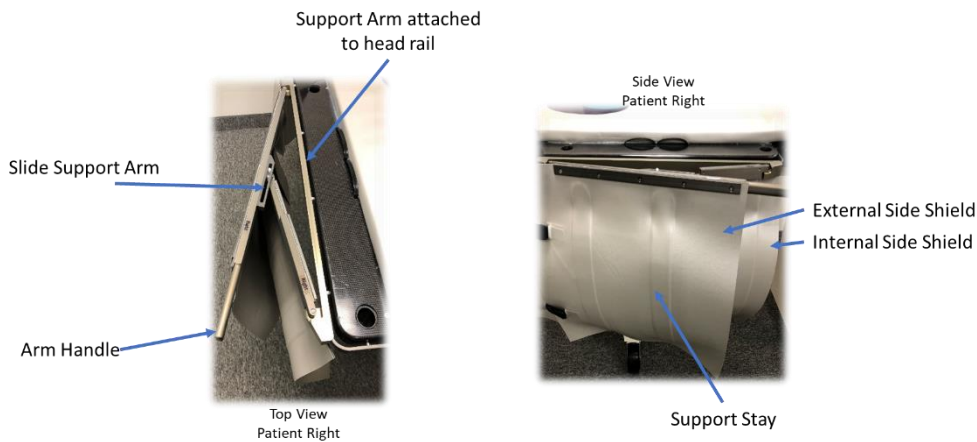
Figure 6: Sliding support arm for left Side Flex Shield can be moved out to support the arm board for radial procedures

c.   The smaller arm of the **Side Flex Shield** on the caudal end of the shield has a similar design. When the **Side Flex Shield** is adducted against the **Base Platform**, the **Flex Shields** reduce radiation scatter below the table. When they are abducted, they form a protective shield while allowing arm visualization with x-ray.

Head Flex Shields (Left and Right)

There are two **Head Flex Shields**, one right and one left. The **Head Flex Shield** has three components.

a.   A support bar that fits over and attaches to the Head Rail on the **Base Platform**
b.   Low profile knobbed screws that lock the **Head Flex Shield** to the **Head Rail**
c.   A pleated hanging **Flex Shield** that provides scatter radiation protection.

Figure 7 Left Head Flex Shield attached and secured to the rail at the head of the EggNest XR™ system.

The Workbench

The **Workbench** attaches to the larger **Side Leg Rail** on the **Base Platform** on either side. This provides a work surface and shielding to the operator and scrub assistant (this can be customized to meet your tableside control needs).
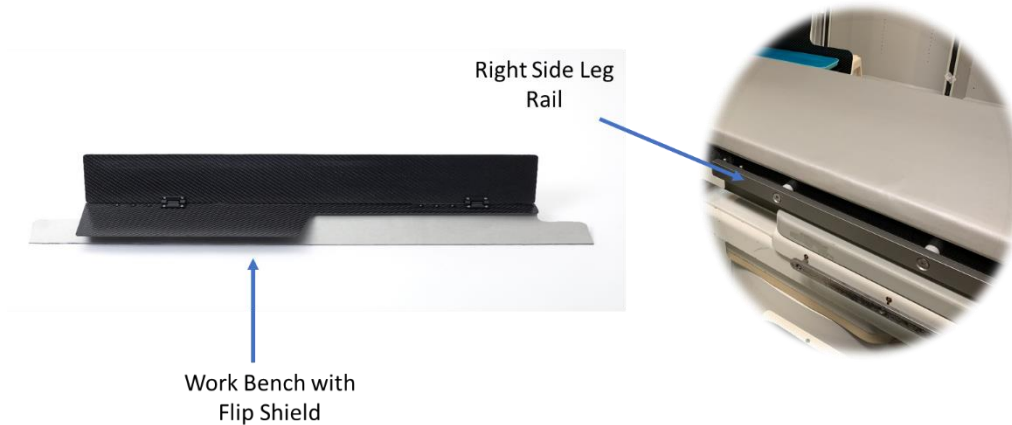
Figure 8: Work Bench with Flip Shield up and the lower Side Leg Rail on patient right side that supports the Work Bench

The **Workbench** shields radiation and serves as a work surface. It has three shielded surfaces that unfold to an adjustable worktable. The **Workbench** is attached to the **Side Rail** of the **Base Platform**, typically on the right side of the platform. It has a "U" bracket under the **Workbench** that will attach to the **Side Leg Rail**. The top surface is attached to the middle, horizontal surface with position hinges that hold their position when rotated. The middle surface is a working surface. The lower surface is attached with the same position hinges.

Figure 9: Workbench attached to the side rail with "Flip" shielding raised for radiation protection and lowered for patient loading

Clear Spot Shield

The **Clear Spot Shield with Hanging Drape** are attached to a flexible arm that is adjusted and moved for ideal positioning when inserted into designated support block on large rail (see figure 11).

The **Clear Spot Shield** blocks radiation scattering off the patient above the **Base Platform.** In some positions, it is designed to work in tandem with the Hanging Shield in the room (not an EggNest component). Also, the **Clear Spot Shield with Hanging Drape** requires a sterile drape to cover both the shield and the flexible arm.

The **Clear Spot Shield** is a transparent acrylic radiation shield that is used to block radiation to the operator's upper body. The **Clear Spot Shield** is mounted on an adjustable, somewhat flexible tube that fits into one of several dedicated **Receiving Channels** on the **Base Platform** or onto a slidable **Flexible Arm Post Bracket** mounted on a **Side Rail**.
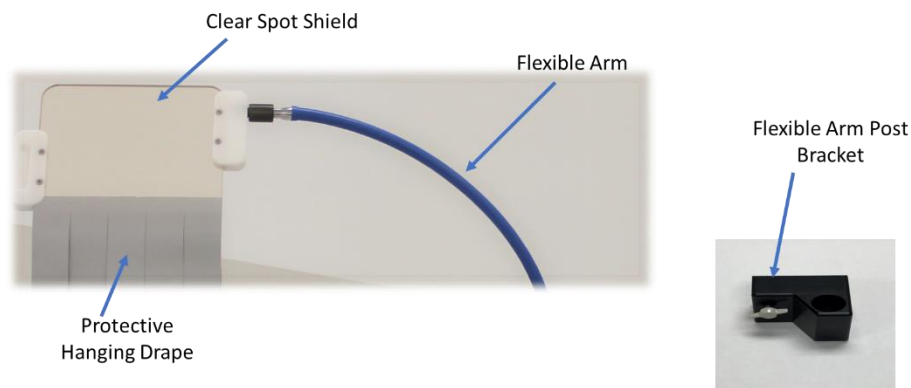
Figure 10: The image shows the Clear Spot Shield and its support block

Pillow and Corner Head Flip Shield

Pillow and Corner Head Flip Shields provide additional head and shoulder scatter protection for staff working near the patient's head during procedures. The **Pillow Flip Shield** attaches to the head rail and can be lowered for patient loading and then raised to block scatter radiation emitting from the patient's head area. Both the left and right **Corner Head Flip Shield** are positioned around the top mattress and can be easily removed.

The **Corner Head Flip Shield** provides radiation protection built into the top and bottom of the base which is positioned over the corner of the two-tier mattress. The side flip shield is lowered during patient loading and raised for radiation protection after the patient is loaded and before a sterile drape is placed on the patient.

Pillow Flip Shield

Right Corner
Head Flip Shield
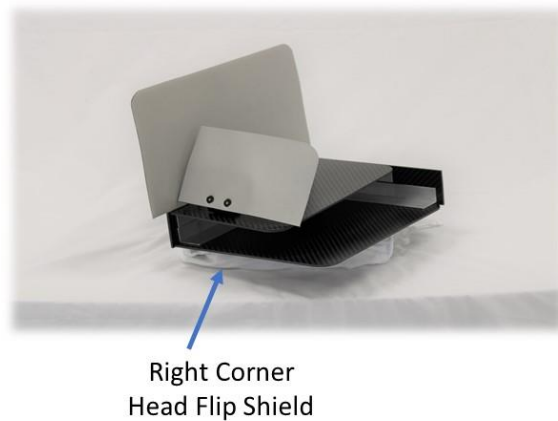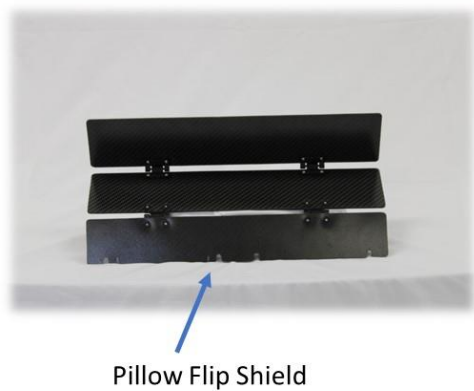
Figure 11: The Pillow Flip Shield and the Corner Head Flip Shield used to provide radiation protection at the head of the table

INSTALLATION OF THE EGGNEST XR™

The EggNest XR™ is designed to rest on a standard x-ray table, replacing the patient mattress.

1. Prepare the x-ray table

- Remove existing x-ray table mattress

2. Place the EggNest XR™ Base Platform on the x-ray table

- Adjust so that the head end of the table and the EggNest XR™ are aligned
- Adjust so the EggNest is centered equally side to side

Base Platform Centered on cath lab table @ head and side to side

Figure 12: The base platform for the EggNest XR™ system on the x-ray table with no components attached

3. Secure the EggNest XR™ Base Platform to the x-ray table

Using the strap attachments under the platform, and secure the EggNest XR™ **Base Platform** to the x-ray table. Ensure that the strips are tightly connected in order to prevent the **Base Platform** from moving. There are two loops in the arm board on each side. The portion of the loop under the table is used to secure a Velcro strip to the **Base Platform**. Either set of loops can be used, but always pair the left and right loops at the same headward distance. Loop the Velcro strip through each loop under the arm board support and connect in the middle by pressing the "fuzzy" layer against the "hook" layer.
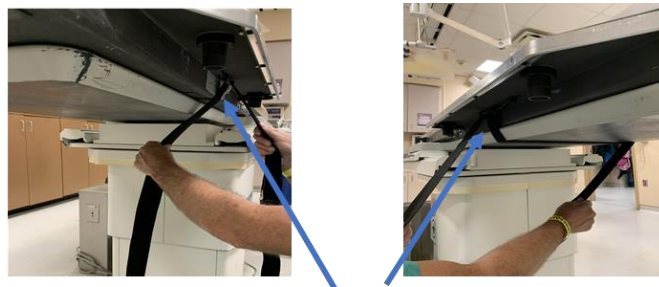
Figure 13: Secure the EggNest XR™ system to the X-ray table with Velcro straps

4. Attach the Side Flex Shields onto the around the EggNest XR Platform

There are two **Side Flex Shields** and that need to be placed on the **Side Rail** of the EggNest. These are marked with either a "Left" or "Right" sticker. In addition, there are two **Head Flex Shields** that need to be attached and secured to the head and shoulder area of the EggNest.

a. Attach the **Left** and **Right Side Flex Shields** to the rail on the side of the EggNest XR™ Platform.

Figure 14: Attaching the Side Flex Shields to the rails on the patient's right side of the EggNest XR™ system

b. The existing Table Shield (also referred to as the Table Skirt) should be positioned slightly outside of the **Side Flex Shields**, overlapping the two shields.

c. Attach the **Left** and **Right Side Head Shields** to the head rail by placing the "U" channel over the rail at the head of the EggNest XR™ Platform. Insure that the channel over the rail is securely in place. Tighten set screws on the **Head Shields**

Head Rail

Right Side Head Shield

Tighten knob to rail

Snap buckle together
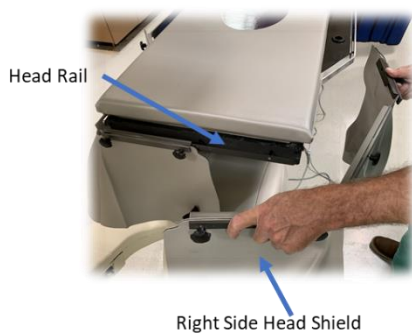
Figure 15: Place the Head Flex Shield on the head rail and secure it by tightening knobs

5. Insert the Arm Boards

Figure 16: Insert Arm Boards post into cylindrical Receiving Channel

6. Insert the Clear Spot Shield

Insert the **Clear Spot Shield** into the dedicated Block on the **Rail Receiving Channel**. Once the spot shield mounting block is in the desired position, the desired position on the Rail, it can be tightened with the thumb lock.
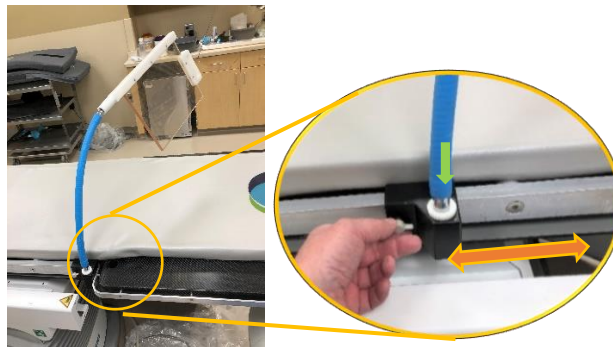
Figure 17: Placing the Clear Spot Shield into bracket on left side of the EggNest XR™

7. Insert the Workbench onto the large Side Leg Rail

To attach the **Workbench** by placing the U channel onto the **Side Rail**. Once placed on the rail, the **Workbench** can be adjusted left or right to border with the arm board support or the table controls. Ensure that the lower flap running underneath the work bench is "tucked-in" between the **EggNest XR™** and the table top, and is out of the way of any controls on the rail. The flip shielding can be lowered for patient loading and raised to block scatter radiation.

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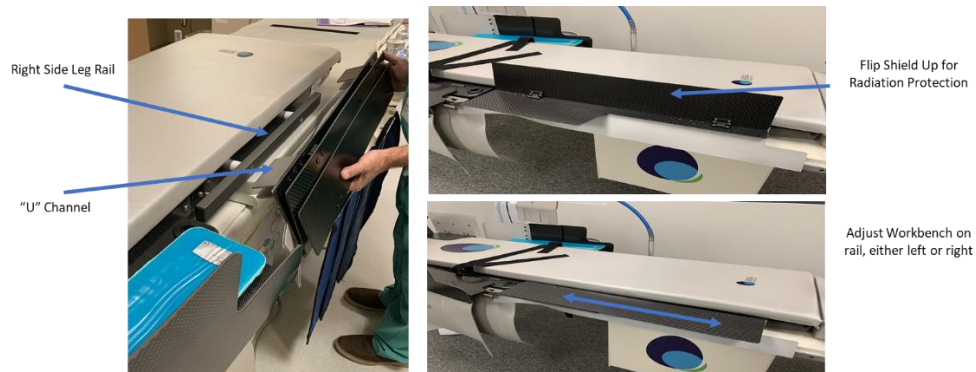
Figure 18: Attaching the Workbench to the rail on patients lower right

8. Attach the Pillow Shield to Head Rail Screw Knobs

Attach the **Pillow Shield** by aligning the cut-out "U's" on the bottom of the shield to the screw knobs that hold the **Head Flex Shield** in place. Only attach the **Pillow Shield** once you have attached the **Head Shield**. After the shield is in place on the four screws, tighten them to secure the **Pillow Shield** to the **Head Shield** rail. Once in place, the **Pillow Shield** can be raised and lowered as needed. Periodically exam the screw knobs to ensure a secure hold of the **Pillow Shield**.
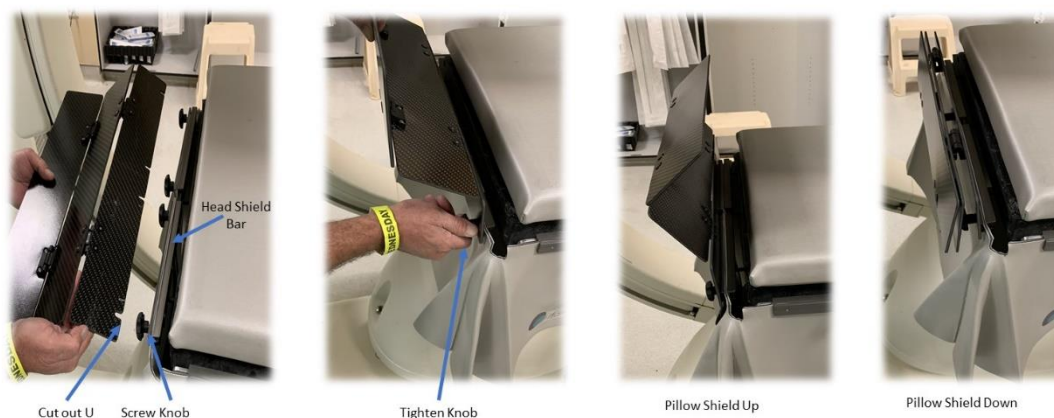
Figure 19: Attaching, securing and raising the Pillow Shield at patient's head

9. Place Left and Right Corner Head Shields on Mattress Topper

The **Corner Head Shields** slide under the upper corner of the top mattress to fit securely in place. These do not need to be removed for patient loading and unloading. The **Corner Head Shield** has a top and bottom carbon fiber board that provides radiation protection from the X-ray beam coming through the table. The patient's sheet and pillow are put on top of the carbon fiber board. The **Corner Head Shield** can easily be removed and reattached if imaging of the neck or head is required.

Slide Corner Head Shield into place

Shield down for patient loading

Shield Up for Radiation Protection

Figure 20: Placing the Corner Head Flip Shield over the top mattress

PATIENT LOADING

Prepare the EggNest XR™ for patient loading by:

Figure 21: The EggNest XR™ with shields in the "down" position for patient loading

1. Make sure that the EggNest XR™ has been wiped down according to hospital policy to remove foreign or biological material and that the EggNest XR™ is attached to the x-ray table
2. Fold the **Arm Board** and **Corner Shield** flaps down
3. If loading from the right, fold the **Workbench** flaps down
4. If loading from the left, remove the **Clear Spot** shield and stow
5. If using a patient bed, slide the bed next to the EggNest XR™
   i)   Using a sliding board or hover mat, move the patient from the bed to the EggNest XR™
   ii) Take care that neither the patient bed or the EggNest XR™ move as the patient could fall through the gap.
6. With the patient on the EggNest XR™, cover with sheet and attach the **Patient Safety Strap**, as directed by your hospital policy.

Patient Safety Strap
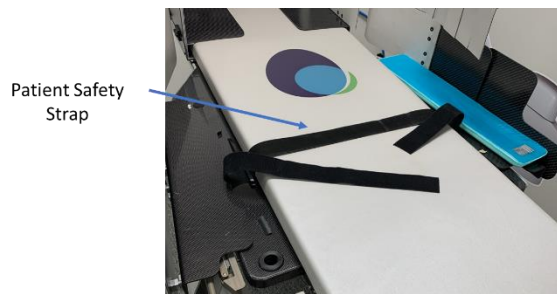
7. If a radial approach is anticipated, position the **Arm Board**. Rotating the **Arm Board** out from the table can most easily be accomplished by pulling the handle below the **Arm Board**. The handle travel will stop when the shield is rotated about 30° out from the EggNest XR™. If more abduction is desired, the **Arm Board** will continue to rotate, but x-ray visualization will be impaired.

Figure 22: Patient Safety Velcro strap

8. Once the patient is resting on the EggNest XR™ raise all the flip shields (left and right **Arm Board**, **Workbench**, left and right **Head Corner Shield** and **Pillow Shield**.) Then position the **Clear Spot Shield** along patient abdomen to align with hanging shield.
    After transferring the patient to the EggNest XR™ and positioning the shielding, the sterile drape can be placed using hospital policy. The edges of the drape should extend over the EggNest XR™ **Arm Board** and **Workbench** flaps, and over the **Workbench** itself.

In general, the EggNest XR™ operates passively during the procedure. The c-arm x-ray gantry can be rotated to achieve the desired radiographic views. The x-ray gantry may contact the EggNest XR™ Flex shields when rotated out of the PA projection. The lower part of the gantry will push the Flex shields away as the gantry turns.

1) The easiest way to rotate from one angle to another is to swing the x-ray gantry through the neutral (PA) position between views.
2) The arm board flip shields may be adjusted during the procedure under the sterile drape to accommodate access and optimize shielding.

Tips for optimal use of the EggNest XR™

- Make sure that the patient head is aligned just below the top of the EggNest XR™
- Flip the Flip Shields up before draping the patient

Flip Shields Down to Load   **Flip Shields Raised for Procedure**

Figure 23: The EggNest XR™ system with all radiation protecting components in the "down" position for patient loading and "Up" for radiation protection

- When transferring the patient off the table, check to see if the arm gel pads moved with the patient.
- By combining the hanging shield and the **Clear Spot Shield** you create a the "box"! This set up significantly reduces the operators head exposure to scatter radiation.

PRECAUTIONS

Safe operation of the EggNest XR™ depends on proper use of the system.

Scatter Radiation Protection

The most effective scatter radiation shielding depends on using the EggNest XR™ according to the directions. Failure to adjust shields properly will result in less effective shielding.

Patient loading

Like all patient transfers, transferring a patient from a bed or gurney to the EggNest XR™ has a risk of patient injury due to falling or pinching during transfer. To minimize the risk of transfer, use care in patient movement and minimize the gap between the EggNest XR™ and the transfer device. Use of auxiliary transfer aids, such as a hover mat system or sliding board, can make transfer easier and possibly safer. Be sure that the EggNest XR™ is firmly attached to the x-ray table or pedestal so that the EggNest XR does not move during transfer. Failure to secure the EggNest XR™ **Base Platform** can lead to movement of the EggNest XR™ and patient or staff injury.

Also, be certain to use proper transfer technique in order to insure staff safety during transfer.

Patient stability on the EggNest XR™

It is important to properly position the patient on the EggNest XR™. The patient should be positioned with the head about 1-2 inches from the top of the EggNest XR™ and in the middle of the long axis of the system. For more safety from roll-off accidents, we recommend using the accessory Security Belt attached to the EggNest XR™, consistent with hospital regulations.

Contact with the x-ray system

If the shields or other EggNest XR™ components come into contact with the x-ray tube housing or detector, do not push or otherwise force the system. Instead, move the table or the x-ray gantry in order to disengage the systems.

It is expected that the lower x-ray C-arm will push the Flex Shield to the side when the gantry is rotated. If the positional detector (also referred to as a collision detector) on the x-ray tube housing is activated, DO NOT continue to rotate the C-arm or move the table in a manner that will cause further interference. Instead, check to position of the x-ray tube housing and C-arm relative to the EggNest XR™ to determine the problem. If the **Flex Shield** or other component of the EggNest XR™ are in contact with the x-ray tube housing, move the table or the x-ray gantry in order to disengage the systems. If the Flex Shield is stuck on the C-arm, gently lift the **Flex Shield** to disengage. In any case, DO NOT force the EggNest XR™ or C-arm components past each other.

If the x-ray detector comes into contact with the EggNest XR™ components, move the x-ray table or the C-arm to disengage. DO NOT force the EggNest XR™ or C-arm components past each other.

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Safety using the Clear Spot Shield

The **Clear Spot Shield** should always be sterilely draped and rotated with care in order not to cause and field contamination or injury to the operator or patient. Be sure that the **Clear Spot Shield** is properly mounted in the receiving hole. Failure to do so may result is the **Clear Spot Shield** falling on staff or the patient, leading to injury.

If the connection between the **Clear Spot Shield** and the connecting arm feels loose, do not use the Shield and send it to Egg Medical® for repair or replacement. Failure to attend to a loose shield could be a lead to detachment with subsequent injury. Similarly, if the clear acrylic is cracked, do not use the shield as it is possible that the crack will propagate, and the shield will detach.

Pinching hazards

There are several potential pinching hazards when using the EggNest XR™. Care should be taken when using the Rotating Arm Board and attached Flip Shields. Fingers or skin can be pinched at the arm boards or shields are moved. Keep finger or skin folds out moving edges and the areas of movement   The Shoulder Shields also are rotated into place when used. Care should be taken to avoid any pinching. Similarly, the Side Shield has two rotating surfaces that could lead to pinching. Keep fingers and skin folds away from the edges of the rotating surfaces.

EGGNEST XR™ FAQ'S

What level of radiation shielding can I expect from the EggNest XR™?

In general, the EggNest XR™ reduces scatter radiation by about 90% for the ENTIRE Team.

(0.5mm lead equivalent).

What affects the efficiency of the EggNest XR™ in reducing radiation exposure for personnel?

Like any system, the EggNest XR™ is most effective when it is used properly. The upper Flip shields need to be flipped into position. The Clear shield needs to be placed properly in front of the operator.

Does the EggNest XR™ platform fit all x-ray tables and C-arms?

The EggNest XR™ replaces the patient mattress on the x-ray table. The EggNest XR™ should easily fit table widths less than 55 cm (at chest level), which includes nearly all tables.

Are the shields removable?

Yes, all the shields lift off the EggNest XR™, except for the internal shielding within the carbon fiber shell.

Can the EggNest XR™ be used in a biplane room?

At present, the EggNest XR™ provides effective shielding for procedures where a single plane C-arm is used. The lower flex shields can be partially or completely removed to facilitate biplane imaging systems, but the level of staff protection will be lower.

Can radial access procedures be performed using the EggNest XR™?

Yes, radial access procedures can be performed using the EggNest XR™. Most standard arm positioning systems fit the EggNest XR™ arm boards (see below for the StarBoard system). The arm boards can swing out 90°. The arm board supports and the arm boards themselves are made from radiolucent carbon fiber to allow imaging of the arm and shoulder. The entire arm can be imaged when the arm is abducted to about 30° or less.

Can the EggNest XR™ be used for procedures in the peripheral vessels?

Yes, peripheral imaging is possible. A modified design with augmented protection for peripheral procedures with standard patient positioning is available.

If the patient position on the table is reversed (feet at the top of the table), excellent imaging and protection can be achieved with the standard version of the EggNest XR™.

Can the EggNest XR™ be used for neuro-interventional procedures?

The EggNest XR™ is not yet optimized for neuro-intervention. Stay tuned! We have a development project in process to modify the EggNest XR™ for optimal use during neuro-

intervention.

What kind of training is needed to use the EggNest XR™ efficiently?

Use of the EggNest XR™ requires minimal training. To load the patient on to the table, the Flip shields need to be in the down position (which allows smooth patient transfer from a bed or gurney). When the patient is positioned on the EggNest XR™ table, the Flip shields are flipped up. The patient is then draped in a standard fashion, with the drape extending over the Flip shields. To unload the patient, the Flip shields are placed in the down position after the drape is removed. The patient is then transferred off the table.

Do I still need to wear a lead apron and other personal protective gear when the EggNest XR™ is in place?

The EggNest XR™ is intended to work with standard personnel protective equipment such as "lead" aprons, glasses, and other wearable items. The EggNest XR™ is not intended to replace a "lead" apron shield. It does, however, markedly increase the efficacy of the "lead" apron and also markedly reduce scatter radiation to uncovered parts of the body, such as the calf, foot, arm, neck and head.

Can or should I continue to use the table skirt and hanging shields?

The EggNest XR™ is designed to accommodate both of these shields. Th e table skirt shield tucks nicely into the lower Flex shield. Based on the particular patient body habitus and access site, the hanging shield is often used as an additional shield between the operator and the patient, at operator discretion.

When will the EggNest XR™ be available for purchase?

The EggNest XR™ is available for general purchase in the United States. Availability in the EU will be in early 2020.

How can I arrange for a demonstration?

The simplest way to arrange for more information and for to schedule a evaluation is to email us at info@eggmedical.com or call 612-916-6616.

How do I clean the EggNest XR™?

The Reflex vinyl covering is impermeable and has a SilverGuard antibacterial surface. EggNest XR™ should be cleaned after each patient use using the standard anti-infective solutions used to clean the rest of the x-ray table and related surfaces.

What is the warranty for the EggNest XR™?

Egg Medical® warrants that the EggNest XR™ is free from any defects in manufacture or workmanship under normal use and service for a period of one year. If a Product fails to meet warranty, Egg Medical® would either replace the defective Product or refund the purchase price.

Can the EggNest XR™ be moved from table to table?

Yes, the EggNest XR™ can be moved on and off the x-ray table. First, remove the shielding attachments (the hanging **Flex Shields**, **Pillow shield**, the **Arm Boards**, **Workbench** and the **Clear Spot Shield**). Then lift or slide the EggNest XR™ onto a cart with sufficient weight capacity (45 lbs.).   It is important to lift the EggNest XR™ near the middle. The easiest method is to lift by both the head end of the rail and the arm supports.

How can I use the STARBoard™ products with the EggNest XR™?

The STARBoard™ products by Adepto™ are not designed to function with the EggNest XR™. It is possible to use them by placing the stabilizing piece (that normally fits under the patient mattress) under the patient, usually wrapped in a with a sheet for comfort. The STARBoard™ positioning accessories will sit about 2-4 inches higher with respect to the patient. You should try the set-up before proceeding to sterile draping.

Can a RadPad™ be used with the EggNest XR™?

Yes, the EggNest XR™ is compatible with other shielding materials. However, the RadPad™ does not provide additional shielding to the EggNest XR™ alone because the EggNest XR™ already has Flip shields that provide four times the shielding present in the RadPad™. And, the EggNest XR™ is a one-time purchase.

What is the EggNest XR™ Story?

The EggNest XR™ was developed by two interventional cardiologists and an engineer. One of the interventionalists had practiced 30 years and knew several colleagues with hematologic radiation-related cancers from hospital exposures. The other interventionalist was early in his career and concerned about how much radiation exposure he was facing. He used extensive protection but found it cumbersome and difficult to work around. The engineer helped develop a system that was effective and functional, blending into the workflow and protecting everyone in the room. They spent four years understanding scatter radiation patterns in the Cath Lab, developing new materials, and perfecting the design. The result was the most comprehensive, practical radiation protection system ever developed for x-ray laboratories.

Care and Maintenance

Cleaning

The carbon fiber sled is made from material similar to that used for most x-ray tables. The vinyl top is Reflex vinyl with Permablock³® sealant and with Silverguard® antibacterial coating

The EggNest XR™ should be cleaned between uses with one of the following cleaning solutions:

PATTERNS INCLUDE: Hitch, Invision, Reflex, Sequins, and Silvertex

Cleaner	Cleaner's Manufacturer	SILVERGUARD® PERMABLOK® Grey Scale ISO 105-A03	Cleaner	Cleaner's Manufacturer	SILVERGUARD® PERMABLOK® Grey Scale ISO 105-A03	Cleaner	Cleaner's Manufacturer	SILVERGUARD® PERMABLOK® Grey Scale ISO 105-A03
303 Fabric/Vinyl Cleaner (dilution: 1/2 cup (4 oz) in 1 gallon water)	303 Products, Inc.	4.5 - Slight color change	Fantastik® Antibacterial All Purpose Cleaner Heavy Duty	S.C. Johnson & Son, Inc.	4.5 - Slight color change	Sanicloth AF 3	PDI	4.5 - Slight color change
A&G Boat Wash & Multipurpose Cleaner (6:1 dilution)	A&G Industries, Inc.	4.5 - Slight color change	Finyl Fix Vinyl Cleaner - dilution: 0.5 oz / quart water	Neuco Seating Inc.	4.5 - Slight color change	Simple Green Towels	Simple Green	4.5 - Slight color change
All Purpose Vinyl Cleaner	CMI Vclean	4.5 - Slight color change	Formula 409® Antibacterial All-purpose cleaner	The Clorox Company	4.5 - Slight color change	Sodium Hypochlorite Disinfectant/Disinfectant Cleaner - Dilution: 0.5 oz / quart water	PCS - Process Cleaning Solutions	4.5 - Slight color change
Asepticare TB + II	Ecolab	4.5 - Slight color change	Four Star All Purpose Cleaner	Four Star	Not Approved - color and hand change	Stride Floral Neutral (1:32 water) - Daily cleaning (1:64 water- Cleaning excess dirt)	Diversey Inc.	4.5 - Slight color change
Babe's Boat Care Wash (dilution: 1 oz per gallon of water)	Babe's Boat Care Products	4.5 - Slight color change	Glance NA Diluted (1:50 water)	Diversey Inc.	4.5 - Slight color change	Stride Fragrance Free Neutral Cleaner (1:266 water)	Diversey Inc.	4.5 - Slight color change
Bio Kleen Amazing (dilution: 6 oz per gallon of water)	Bio Kleen Products Inc.	4.5 - Slight color change	GP Forward Diluted (1:64 water)	Diversey Inc.	4.5 - Slight color change	Super S	Tekonsha Corp.	4,5 -Slight color change
Caviwipes XL Packed	Metrex	4 - Moderate color change	Hydrogen Peroxide Cleaner Disinfectant Wipes	Clorox	4.5 - Slight color change	Super Sani-cloth	PDI	4.5 - Slight color change
Clorox Healthcare Bleach Germicidal Wipes	The Clorox Company	4.5 - Slight color change	Lysol Foaming Disinfectant Cleaner	Brand, IC	4 - Moderate color change	Vinyl Sauce	Boat Blins	4 - Moderate color change
Crystal Simple Green - dilution 1:30	Sunshine Makers, Inc.	4.5 - Slight color change	Mold & Mildew Stain Remover dilution: 1 scoop (1/2 oz) per quart water	Iosso Marine Products	4.5 - Slight color change	Virex II 256 (1:256 Dilution)	Diversey Inc.	4.5 - Slight color change
Coverage Plus Germicidal Wipes	Spray Nine	4.5 - Slight color change	Mother's Leather Cleaner	Mothers	4.5 - Slight color change	Virox 5 Rtu	Diversey Inc.	4.5 - Slight color change
Dispatch (1:10 Dilution)	Caltech Industries Inc.	4.5 - Slight color change	Oxivir TB Wipes	Diversey Inc.	4.5 - Slight color change	Wex Cide 128 (1:128 dilution)	Wexford Labs, Inc.	4.5 - Slight color change
Ducky All Purpose Cleaner	Ducky Products, Inc.	4.5 - Slight color change	Oxycide Diluted - 3 oz/gl in water	Ecolab	4.5 - Slight color change			
Fabric Cleaner	Tekonsha Corp.	4.5 - Slight color change	Reprosolv - Dilution: 1/40	American Continental Techlabs, LLC	4.5 - Slight color change			

Cleaner results are rated on a scale of 1 - 5	1-3: Causes discoloration. Not recommended	4-5: *Recommended for use

*Cleaners only recommended if diluted per manufacturer's instructions. Topical cleaners must be wiped off with clean water and dried with clean cloth following application. The performance results shown in this chart are not guaranteed for all SII Vinyl and Polyurethane products. The evaluations are indicators after laboratory tests and may not be indicative of field performance. Healthcare facilities maintain disinfecting regimens to reduce the spread of infections. There is a wide variety of available biocides that include bleaches, peroxides and quaternary ammonium products, among others. They should always be used at the recommended dilution, never in concentrated form. To prolong the life of digital or any other coated fabric, they should be rinsed off after the recommended residence time. It should be noted that misuse of disinfectants is the major source of surface deterioration. Spradling continually evaluates cleaners/disinfectants. **Samples showed slight wear at Wyzenbeek 100,000 cycles

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Figure 24: Cleaning solutions to be used on the EggNest XR™

Be sure to thoroughly clean all surfaces in order to prevent transmission of infectious agents or biohazard to staff and between patients.

If the vinyl fabric develops a cut or hole, notify Egg Medical® for repair. Discontinuity of the vinyl surface can lead to an infection hazard by allowing biological materials to enter the fabric and foam. Discontinue use or apply an adhesive seal (3M™ Tegaderm™ Transparent Film Dressing) to the area until the EggNest XR™ is repaired.

Periodic x-ray examination

As with "lead aprons", all flexible shielding should be periodically examined for cracks or discontinuity in the shielding. Please follow hospital policy regarding examination of shielding.

Egg Medical® recommends that the integrity of the Flex Shielding be checked every 6 months or if there is visible damage. If, on fluoroscopic examination, there are cracks or holes, discontinue use of the shielding and contact Egg Medical® for repair or replacement.

Egg Medical® Product Warranty

What the Warranty Covers:

Egg Medical® guarantees that the Egg Medical® EggNest™ product you purchased is free of defects in workmanship for one year after purchase.

This includes:

      Discontinuity of the outer material coming into contact with the patient

      Structural defects in the sled or arm board components (not caused by misuse)

      Material defects in the radiation blocking material

What the Warranty Does Not Cover:

Egg Medical® products are intended to be used in high flow areas of the hospital. We do not warranty defects that arise from repetitive use and normal "wear and tear." This includes cosmetic defects, stains, structural failure due to misuse (such as breaking the sled or arm boards from inappropriate movement of the x-ray gantry or dropping the unit on the floor)

Repetitive flexing of any radiation blocking material may result in fractures of the material. The integrity of the shield should be tested periodically in accordance with hospital and local regulatory policies. If the material fails in the warranty period, it will be repaired or replaced by Egg Medical®.

Period of Coverage for this Warranty:

This warranty extends coverage for 1 year from the date of purchase.

What Egg Medical® Will Do to Correct Problems:

Egg Medical® will replace or repair your product within 30 days of notification of a covered problem. It may be necessary for you to send the defective unit back to Egg Medical®. You will be provided with shipping instructions.

How You Can Get Service:

To report a Warranty issue or concern, please go to the website www.eggmedical.com and click the "Contact Us" tab. Alternatively, you can call 612-916-6616 during business hours (8:00 AM to 5:00 PM Central Time, Monday through Friday).

Egg Medical® reserves the right to change the method of contact.

Appendices

A. Part Specifications

Part	Radiation shielding	Pb equivalence	Weight (lb/kg)
Base Platform	Partial*	0.5 mm	44.5/20.2
Arm Board	Side	0.5 mm	5.0/2.2
Side Flex Shield	Complete	0.5 mm	13.0/5.8
Head Flex Shield	Complete	0.5 mm	8.5/3.8
Pillow Shield	Complete	0.5 mm	3.0/1.3
Corner Head Shield	Complete	0.5 mm	5.5/2.5
Workbench	Complete	0.5 mm	6.0/2.8
Clear Spot Shield	Translucent portion	0.5 mm	5.5/2.6

*The edges of the **Base Platform** shell and Foam Top are lined with shielding material, except the area inside the arm supports (to facilitate diagnostic imaging)

B. Service Contacts

EggNest XR™ service requests and questions can be directed on-line to www.eggmedical.com/info or by calling +1 612-916-6616. (This telephone number is subject to change, please contact the website http://www.eggmedical.com for the most current contact information.)

MSDS Information for the EggNest XR™