**Supplemental Digital Content 1**

Email Group Notification about the Change from Soda Lime to Litholyme

The following email was distributed to all clinical anesthesia staff on Aril 14, 2014, informing them of the impending change to Litholyme®

Date: 4/14/2014 11:39 AM

Subject: Change of CO2 absorbent – Sodalime to Litholyme

We are in the process of changing our anesthesia machine CO2 absorbent from *Sodalime* to *Litholyme.* The changeover has started on the 7 Gibbon and 5 Pavilion operating rooms. We hope to have all of the anesthetizing locations changed over to *litholyme* by the end of the month.

*Litholyme* has several advantages over *Sodalime*:

1. It has a higher CO2 absorbing capacity therefore it should last longer.
2. It does not produce dust. This eliminates the danger of inhaling the dust when changing the absorbent and will also stop the problem we have of the dust residue accumulating on the inside of the absorber.
3. *Litholyme* does not recharge; the color change is permanent once it occurs. The color indicator is, however, a less intense color that the sodalime and is a little harder to see. As a result, we ask that you change the litholyme when the inspired CO2 level is 5.
4. Neither carbon monoxide nor compound A are generated during the interaction of the inhaled anesthetics with *litholyme* which gives it a safety advantage over sodalime.

The only disadvantage of *litholyme* is that it costs about $5/bag more than sodalime. In order to help defray this additional cost, we are asking that the absorbent be changed after the inspired CO2 concentration reaches between 2 and 5 (The U.S. Navy submarine force uses a lithium hydroxide absorbent and changes the absorbent at an inspired CO2 value of 5). For routine anesthetics, you can safely wait until the ICO2 is 5 before changing the litholyme. You probably want to change the absorbent at the 2 level if you are about to give anesthesia for a long laparoscopic case or if your next case is long. This will avoid having to change the absorbent during surgery.