Author	Comment
Dr. Ronald Navarro	Cost control. We have been saying this for several years now. I gotta tell you - standardization is the first best innovation. New products have to be over the top better and cheaper (and that's the rub). Standardized care paths for the already solved stuff should be a historical fact but they aren't. I've had even in my system docs argue as to whether home health should get to a home on day one of a no stay joint vs within 7 days. Likely no difference in outcome and docs will argue for a whole hour on this. Dumb waste of time if you ask me. Hell if we just got every Ortho to use aspirin 162 for VTE prophylaxis for most cases we would save the systems money and allow for other correct items to be bought. But alas no one wants to give up autonomy on simple decisions like that. And some make fees on speaking for Pradaxa etc. If that's how you make your money don't call yourself a surgeon primarily is my opinion. We have to be active participants in our own solutions. Not hang onto the already solved stuff as if it makes nominal diff for our individual patient. You are a great surgeon. Will your outcomes really change dramatically, (enough for the value equation to be satisfied) with new tools or implants? Hard for me to believe you could vastly improve that much to justify the cost. Not trying to quash the entrepreneurial spirit but the CEOs are saying the cost of Care has to be gutted per the attachment you sent. On the other hand, linking to the prior email string, are they saying that to maximize profits or for the good of the healthcare system? It's known that the mid level non physician managers are swelling in ranks and

	cost as we the docs get incomes cut in many of the practice settings. Thanks for reading my thoughts. Have a nice week. Ron
Dr. Jon Warner	Hi Ron: Thanks for your comments. I hope you don't mind if I post this discussion as it is very informative for everyone checking into this blog. First of all, let's remember Codman's words "*Show me something different for there is a chance of it being better."* Standardization is great to a point and good for managing costs, but measurement of outcome and costs gives us value and this is better. As to new products being cheaper, all products start out at a higher price point and then competition brings them down as differentiation is diminished with competition. Do you think we should never have considered reverse prosthesis? It was very expensive. From a company's point of view the sunk costs of R & D and development and the ramp up costs drive a higher price point; and innovation comes at a price with accountability to the company's shareholders. Over time, reverse prosthesis prices have dropped due to competition. Overall, these are more expensive than TSA. Should we have deferred to lower cost hemi's for RCTA as we did in the past? Or consider highly x-linked poly. This was created at the MGH in Bill Harris' lab and development was driven by industry investment. Once the different versions of XLP came to market the price of poly went up in TKA and THA. The MGH would not permit its arthroplasty surgeons to use this technology even though it was developed and licensed from the MGH Labs. Eventually, the

	price came down. The problem is that most of the value for this implant is captured as durability for the patient. The hospital get's paid the same (probably) by insurance whether or not it is more expensive XLP or non-XLP. This is a very different argument than some of the things you propose in our comments. Standardization of processes through measurement and then determination of ultimate value is an incremental innovation. The examples I have given above are disruptive. Disruptive innovation is always more expensive than incremental innovation. As to my outcomes being changed with new tools or implants, the answer is a resounding "yes." There is no question my outcomes in terms of lower errors and durability will improve with Blueprint planning for shoulder arthroplasty. Moreover, technology allowing Augmented Reality and Artificial Intelligence for decision-making will lower costs further in the future. Initially, the cost will be high as for other disruptive technologies as outlined above. Large institutions such as Kaiser, MGH, and others are by their nature late adoptors or laggards on the curve of adoption of innovation adoption. This is due to their complex missions and minimal margins. I believe that the Codman Shoulder Society must embrace this paradox of cost and innovation if in the end we seek to promote innovating value. I am giving a talk on Disruptive Innovation at a local AMC this week and this is the theme. I'll be posting some additional articles on this topic on the "Warner's Corner" blog soon. These will come from clinicians and business experts interested in all the issues you mention. Thanks for your comments.

	Best Regards, JP Warner