Comments for Query: ‘Prosthetic Joint Infections (PJI) in Adults’

Comments made by 86 respondents.
State or province of practice shown in brackets, e.g., [CA]

Comments about oral suppression for retained hardware
• I remain uncertain regarding the value of long-term oral antibiotics with implant retention, but am more prone to use them if the isolate is resistant to a quinolone and I cannot use the quinolone-rifampin regimen recommended by Zimmerli. [CA]
• Long term suppressive therapy I occasionally do when there are no alternatives. [AZ]
• I always wonder if chronic oral suppressive therapy is warranted after initial treatment of a PJI with retained hardware. But I do it. [TX]
• Depends on whether this infection occurred within a month of initial surgery or later as well as age and medical condition of the patient. [IL]
• Duration of PO suppression with retained hardware varies depending upon pathogen. If it is a Strep species months to a year may be given. If Staph aureus lifelong [MO]
• I will give cipro po no matter the indication. For retained hardware-I usually go 6 months and re-discuss with pt. I will leave abx for life occasionally. [MA]
• For early infection with I&D and exchange of poly liner, 3-6 months PO suppression; all others, lifelong if low toxicity regimen. [CA]
• #7 too un-nuanced. I shoot usually for >6 mos, and years, but seldom successful b/c of toxicities. [MA]
• My general approach is continued oral suppressive abx after completion of initial course iv abx in cases where device is retained unless diagnosis uncertain, resistance, or other compelling reason. [VA]
• Prolonged antimicrobials does improve clinical cures with retained hardware even in Staph infections
• Depends on pathogen, co-morbidities, and patient’s goals of care [MA]
• Strongly favor explant. Only try 6 months of combination with rifampin if orthopedics or patient refuse to take joint out. [PA]
• Have only seen one or two patients that required amputation in my career so far - generally I favor treatment with very long courses of PO suppression or prophylaxis, especially with Staph aureus MRSA and MSSA. Success rates here are excellent with few failures. [PA]
• During fellowship we used to treat for 6-8 weeks with IV antibiotics and stop (if the hardware was removed), and for 6-8 weeks followed by oral suppression if we have an option (if the hardware was retained). After IDSA released its MRSA guidelines, now (if the hardware was retained) I give the pt few weeks of IV antibiotics/rifampin (2-4 weeks) then switch to rifampin based oral regimen (6 month for hip and 3 months for knee), then stop. [WV]
• Doxycycline and/or TMP-SMX for chronic suppression in pts not able to tolerate re-op or explant. [NY]

Comments about IDSA guidelines
• I look forward to the new IDSA guidelines, as I am sure many of my colleagues do. [CA, OH, AK, CA, IA]
• This survey is important, and I hope it is followed by a set of guidelines to set some sort of practice standard among ID docs (like the upcoming IDSA guidelines?). [NY]
• Note: updated IDSA guidelines soon to be published and were just reviewed by IDSA Board. [CA]
• Consensus paper jointly with orthopedic society to include pre-operative screening (MRSA), topical prophylaxis (ie chlorhexidine baths +/- chlorhexidine impregnated wipes), use of antibiotic impregnated cement, length of antibiotic therapy, etc [CA]
• Guidelines including surgical management from the IDSA would be very helpful [IL]
• I am an ID fellow completing in 3 weeks. Different faculty have different thoughts (especially elder ones and new faculties). As a junior ID, I am looking for PJI guidelines in this summer. [KS]
• Looking forward to those guidelines... Very difficult infections to treat sometimes. [OH]

Comments about relationship with orthopedic surgeons
• Challenging, as most orthopedic surgeons want to be aggressive and that puts the onus on ID to take care of the issues. It's easier to start than stop therapy. [MD]
• A close working relationship with orthopedics is essential to a favorable outcome. [WI]
• Coordination of treatment with surgery is essential. [SC]
• I think it is important to have adequate follow up with the surgeon and their input as well. Sometimes even though cultures are negative the surgeon can give clues to the gross appearance of a joint during washout etc. For as long as I follow with the patient while on antibiotics for PJI I will routinely have them follow with their surgeon. [FL]
• It can be very complicated and difficult in my experience especially if you don't have a good relationship with the orthopedic surgeon [TN]
• Biggest problem: getting Ortho to remove all hardware, 2 stage replacement. 90% cure [VT]
• Our orthopedic docs routinely do a "poly exchange" and leave the metallic hardware in place. I have no control over this. [MT]
• When do you push for prosthetic joint removal?? It seems like the Orthop make that decision without ID input or care less what we think? [OK]
• The ID physician usually does not get a say in deciding if prosthesis stays in or out- the Orthopedist generally decides that and leaves the ID physician to explain to the patient what the consequences may be. It really begs for better collaboration between the providers and joint guidelines in place. [NY]
• Most of our institutions, ortho infections are now overseen by a dedicated ortho ID physician. This improves communication with the surgeons and ensures patients are on appropriate therapy. [CO]

Comments about culture-negative cases of PJI
• Number of culture negative cases has decreased by using ribosomal sequencing. [MI and WI]
• I am lucky in that "my" orthopedists value the importance of obtaining proper cultures prior to starting therapy. As in endocarditis, consideration for unusual pathogens rises sharply when properly obtained and processed routine bacterial cultures are negative. This affects empiric therapy. [IN]
• Improve synovial fluid culture by using at least 10 ml fluid into blood culture bottle (increase recovery of alpha strep and CNS) [VA]
• When culture negative but clinical data suggests infection, usually use Gram pos and Gram neg coverage for 6-8weeks, then an oral regimen. [MS]
• What is the role of 16S rRNA analysis in culture negative PJI? Is there guidance out there? [CO]
• I do not know the percentage of artificial joint infections that are culture negative - my impression is that more than 50% are negative. [FL]
• Commonly use IV vancomycin and po cipro together for culture negative cases. [IN]
• Life would be easier if we had some type of 16S rRNA PCR that was readily commercially available and reliable to at least guide us regarding type of organism for all the culture negative cases. [TN]
Use of oral agents
• Consider possibly using oral agents since very little data proves we need to RX IV. [CA]
• It is not at all clear that one even needs an induction IV phase. There are plenty of data with oral therapy.
• Sensitivity data are used to simplify antibiotic regimen, especially to oral agents where possible. [IN]
• I see way too much use of out-patient IV antibiotics for bone and joint infections. Minocycline has excellent bone and joint penetration and no IV access needed. There appears to be a direct correlation between a physician's connection to OPAT operations and their recommendations of OPAT. [LA]
• Recently have used more quinolone or minocycline oral therapy for all or part of treatment. [MA]
• Not convinced IV adds much, especially when PICC complications are so problematic. High oral bioavailability of abx active against identified or expected pathogens very appealing. [MA]
• I am moving more towards switching to PO therapy after a few weeks of IV, particularly with Staph.
• The design of this questionnaire is not very receptive to input from ID clinicians (such as myself) who sometimes treat patients with susceptible-staphylococcal lower extremity PJIs for up to 6 months with an oral regimen (e.g., quinolone plus rifampin). [MA]

Need for data
• There is lack of high level evidence in many of these cases and we are left to mostly opinions. [TX]
• Need a registry!! So various strategies can be assessed: --oral regimens when explanted? Equivalent to IV; --quinolone/rifampin regimens - what duration? True chance of cure? (retained implant); --are normalized ESR/CRP surrogates/predictive of ability to stop with explant, retained implants? [WI]
• Important topic for my practice. Very little GOOD data. [CO]
• Need more data on efficacy of "poly exchange" in treatment of prosthetic knee infections. [IN]
• I reviewed the UK literature on either short-term or no post-op antibiotics after prosthetic joint removal and placement of an antibiotic-impregnated spacer for our ID journal club. The results look good. However, the 1 orthopedist at our institution with whom I discussed this said the Brits do crazy stuff and our results are better with the 2-stage exchange and 6 weeks of IV antibiotics, implying this approach would not be received well here. It would be nice to have a comparative study of these 2 approaches. [AZ]
• Minimal data. Guidelines have little data also! [NJ]
• Would like to see more data for doxycycline in bone & joint infections! [NY]
• Can't get around that much of this is seat of the pants. [PA]
• Need more data on importance of biofilm penetration/activity of agents. For example, does this translate into greater success with daptomycin vs vancomycin? [LA]

Comments about use of rifampin in treatment of PJI
• For PJI with Staph aureus infections, I add rifampin (300mg po bid) to the regimen I specified. [NJ]
• If retained prosthesis and staph, 6 weeks IV then 3-6 months PO, all with rifampin; if quinolone susceptible would use quinolone preferentially for convalescent phase. [AK]
• Rifampin is an important additive. [CA]
• Probably will add more rifampin in the later stage of treatment in future for staph infections. [CA]
• Do not use rifampin with vancomycin in MRSA infections due to uncertain data regarding antagonism and worse outcomes. [MT]
• I frequently do use rifampin as adjunctive Tx with the primary agent for Staph infections. [GA]
• Should rifampin not have been an option for culture negative disease? [NY]

Determinants of which antibiotic to use
• Antibiotic therapy also affected by any changes in hospital antibiogram for a particular organism. [CT]
• Therapy always includes a continuous risk/benefit analysis. Changes can be made based on drug
tolerance, clinical response, how long the prosthesis was in place and whether it was removed. [IN]
• I am influenced by the pts' underlying "substrate", e.g.: a rheumatoid on immunosuppressants is different
than otherwise healthy person. A diabetic. [CO]
• Every PJI is different. So much depends on complete surgical explantation, a specific isolate,
susceptibilities, host defenses, cost issues, etc. I am a proponent of high dose dapto although cost
issues complicate. I ALWAYS want susceptibility on all isolates. I have seen vanco sensitive, dapto
resistant MRSA. Linezolid is fabulous orally, but I worry about lack of cidality and side effects. [AZ]
• I find that the major determinant of what antibiotic I use is insurance. For Medicare patients not needing
a nursing home, we need a once daily option, so they can go to an infusion center. This is why
daptomycin is used so much for MSSA infections. The same holds true for uninsured patients in which
the hospital foots the bill. It is cheaper to get an infusion center for something once daily. [MT]
• I have rarely used oxacillin/nafcillin due to the significant complexity and inconvenience for OPAT [OR]
• Adequacy of surgical debridement helps decide length of therapy and whether PO plays a role. [OK]
• I ranked "completion of a predetermined course" high because usually I only look at the other factors in
follow up, which is by definition after the predetermined course of therapy. [TN]
• I also like levofloxacin because of its excellent bone penetration [FL]

General approaches to treatment of PJI
• Treatment duration depends on organism and GOAL (cure vs. suppression). [WI]
• Our success rates seem quite high with above regimen. We are a referral center and have the infected PJI
send to us from the entire area. [KS]
• There should be some discussion about the role of quinolones, which are not listed among your options.
• 1) antibiotic impregnated cement spacers are used if joint is removed in a 2-stage procedure. 2) we try to
do 2-stage procedures, if possible. 3) we tend NOT to use ceftriaxone for MSSA even with the recent
info. Giving oxacillin via pump is almost as easy. [NY]
• I have treated Rocephin failures for MSSA PJI infections after removal. I assumed ortho surgeon
debrided adequately. Rocephin not standard of care in my opinion. [CA]
• Often cure early onset PJI but many of these are probably deep wound infections without involvement of
the prosthesis. Rarely cure late onset PJI without joint explantation. [NY]
• In my opinion not all joints need removal. Good wound care and biofilm management have saved a few.
• ESR and CRP not always helpful when patients have other inflammatory conditions. I sometimes use
procaldotonin levels in these cases. [IL]
• Usually do a delayed exchange after explantation [IN]
• I am in Florida and mostly dealing with elderly pts which limits use of rifampin and retention of
hardware after debridement has been the only option in some of these cases [FL]

Miscellaneous
• As an ID doc at a referral hospital for revision orthopedic surgery, I frequently get to see infected
prostheses after failed treatment. The wide variety of strategies (abx choice, duration, monitoring, site
of administration, concomitant rifampin) in the community never fails to surprise me. [NY]
• For clinicians to understand that negative cultures on antibiotics do not always mean resolved infection.
• 1) how many do sonication of prosthesis to culture? Can someone go over the details on how the
prosthesis is processed and cultured in lab? What vortex equipment is used? Step by step procedure
would be helpful. How labor-intensive is it? Does insurance pay? 2) Is anything else done to process
the specimen to help with diagnosing the organism? 3) How does one treat Aeromonas prosthetic knee
infection? 4) Does prosthesis always need to be removed? When would one remove it and when not?
• I'd be interested to hear what others are doing for enterococcus PJI. [MI]