Comments for Query: 
Outpatient Parenteral Antibiotic Therapy (OPAT) Safety’

Comments made by 115 respondents.
State or province of practice shown in brackets, e.g., [CA]

Safety issues/challenges with providing OPAT
• There is confusion about who is accountable at times - the consulting ID Doc (us) vs the Primary Care Provider or Surgeon - by the Home Health Agencies, despite clear orders, etc. [NC]
• Variability of home infusion company competence. [NM]
• Another major problem is blanket refusal of home health to allow home infusion for ivdu. [OR]
• Often difficult negotiation with insurance company [NY]
• Irresponsible attitude of hospital contracting officers who engage OPAT providers who fail to use labs connected with our electronic health record. Ironically, justification of EHR is related to safety (from integrating data). System discourages good communication among ID staff and OPAT providers-- quite a contrast from inpatient care. I'm angry and disgusted! [NE]
• Unfortunately, our EMR system makes it difficult to ensure my patients going to SNF's get the proper monitoring as I can no longer directly write discharge orders. [WA]
• I have had 2 patients die of illicit drug overdose using their PICC lines over the years after swearing they were not users. We often keep IDU patients in the hospital for prolonged periods of time because we fear this complication. [TX]
• Case management pushes me to discharge on OPAT, but I have no control or reimbursement unless the patient comes to my office. I do, however, have responsibility. [NJ]
• Too many agencies w/ poor coordination & communication; need more email info, fewer faxes. [MA]
• Not enough home infusion companies that take Medicare [IN]
• In my secondary hospital, patients are discharged and then come to my clinic when there is time available - this has led to some unhappy developments. The major problems are lack of good communication between the inpt and the outpt clinic, difficulty getting the lab results from the commercial labs that the infusion company uses. These problems are difficult to manage because of system problems at the secondary facility. [FL]
• Safety issues arise when not seen by ID and no clear outpatient f/u arranged. Pts lost when no f/u appointments scheduled. Labs often don't get to the ID clinic for review. Overall theme is not enough discharge planning and not enough personnel to track after discharge and before clinic f/u. [NC]
• ECFs are the most dangerous. They don't send me labs as requested or there is a dangerous delay in getting the results to me. [OH]
• OPAT is fragmented. Home IV companies do not make it a priority to forward lab results to physicians in as timely a manner as possible. Care would be improved if the same healthcare system provided inpatient and outpatient care. Medicare should pay for outpatient antibiotics so patients do not have to go to ECFs for antibiotics which only complicates care further. [CT]
• Obtaining appropriate outpatient follow up in the clinic [MO]
• In last 2 years large increase in heroin related infections. Often have issues with patients actively using drugs while still in hospital, let alone leaving hospital with PICC line. Nursing homes or SNF do not want to accept IVDA patients. Hospital system does not want to keep patient in acute care for 6 weeks of endocarditis or lumbar osteomyelitis therapy. I would be interested in hearing how other ID physicians deal with this increasing problem. [KY]

• As an inpatient only ID doc it is very challenging to adequately follow all labs and phone calls and retain documentation without hospital based administrative support. [TN]

• Despite no formal program, home health agencies have been pretty good at identifying issues early and paging us. Our biggest problem is usually the patients - poor living conditions, drug abuse, lack of compliance. [NC]

• The costs of running an outpatient practice are rather prohibitive, rendering the provision of follow up challenging. [AZ]

• The number of adverse events varies significantly depending on how dedicated the outpatient pharmacist is and how much experience they have. Majority of our significant events are related to nephrotoxicity from vancomycin, especially when patients are elderly, diabetic and with pre-existent conditions. We had pharmacists doing a great job with monitoring, and pharmacists who made inexcusable errors in dosing. Unfortunately ID does have no control over the infusion companies chosen on discharge. In fact many of the adverse events happened in nursing homes rather than in outpatient infusion centers or at home, where we keep a closer eye on the levels and on what pharmacy is doing. [OH]

• We see an underserved patient population. Frequent challenges include language barriers, alcohol and drug abuse (esp IVDU) issues, bad contact information for patients, e.g. disconnected phone numbers, missed follow up appointments with outpatient ID clinic, finding missing patients. Coordination of care with skilled nursing facilities is often more time consuming than if patient is at home. [CO]

• While each complication is rare or infrequent, when you have 5-10 pts on OPAT at one time, management of complications becomes rather burdensome. An example is the pt whose PICC comes out at night, the home health nurse refuses to give the OPAT via a peripheral IV so sends the patient to an ER where they cannot place a new PICC, my clinic is notified the next day and then it takes my nurse 1-2 days to arrange for a new PICC to be placed. [LA]

• There are too many providers and people involved in this service at our institution, and no one seems to be able to take responsibility for it. We are trying to develop a better system. [NY]

• More patients being sent out with poor home situations and poor support contribute to higher complications. Many of these patients also have no other physicians who are monitoring either the primary infectious problem (if surgical) or their other medical problems. [NJ]

• The major problem is when ID is not involved, then there is not a clear path to follow up labs. [NY]

• In the setting where a handover occurs, often information is lost in translation between the inpatient provider and the outpatient provider (who may have never seen the patient). [TN]

• I work at a teaching facility where fellows often rotate on/off service or to other locations. Signing out patients tends to be an issue, where some patients may be lost to follow-up if faxes are not received and covering physician is not aware to follow-up on labs. We are currently trying to address this. [TX]

• Tracking lab results is the biggest issue. I try to have the home IV CO send to Quest using my account# so that the labs come in the usual information stream. Also an issue is that sometimes residents give orders for home IV and miss things like ordering any labs during 6 weeks of vanco. Having reps from the home IV CO on the wards helps get organized. Medicare part D approval for drugs can be a barrier - enterococcal endocarditis but PCN is not on formulary!!! [NY]

• Preponderance of uninsured patients constrains options for OPAT. A single dedicated ID physician oversees most of these patients. [IL]

• Diversity of training of home nurses is concern. Great heterogeneity in different VNA's practice regarding picc care, TPA, etc. [MA]
• Medicare pts requiring more complicated IV abx typically have to go to a NH SNU & we have great
difficulty getting them to FAX us labs & have them send pt for F/u, yet we are responsible. [MO]
• The sheer volume of patients needing management is immense at our institution (public hospital) [TX]
• The lack of patient follow up for clinical issues has become a major medical legal concern. Some pts just
refuse to re-see a MD/DO for scheduled management issues. [NJ]

Reimbursement/Payer issues for OPAT
• We are crippled by TOTAL lack of payment for MD Rx and supervision of home IV ab Rx. [PA]
• In California, Workman’s Comp is the worst. They will not pay/authorize an infectious disease
consultation or followup. I have had surgeons begging me to see their patients because they are
uncomfortable monitoring IV antibiotics. I have cared for these patients basically for no compensation
in the past but no longer. [CA]
• Hospitals provide discharge coordinators, social workers, etc to help facilitate the discharge on OPAT;
however, after discharge there is no centralized staff that coordinates all aspects of care. Our ID team
has taken it upon ourselves to do this. We do so with no additional funding....much gratitude...but no
funding. [CA]
• While not addressed in this survey, THIS IS VERY IMPORTANT: Is anyone else bothered by the fact
that Medicare does not provide good coverage for home IV antibiotics. Has anyone else ever
prescribed an expensive, unnecessarily broad spectrum and overkill IV antibiotic (usually dosed once
daily, but I will not mention names) because Medicare will pay for it at the infusion center but not for
a cheaper, narrower spectrum and more adequate antibiotic in the home infusion setting? Anyone else
see an ethical and medical dilemma on this game we are forced to play in order to take care of our
patients that cannot afford home IV antibiotics? [SC]
• The fact that the ID docs are expected to do most of the work without any support puts a great burden on
already stressed ID docs. [ME]
• Arranging payment for the nursing and doctor time required to perform this monitoring is our biggest
problem. We have a system that works well, but it's time-intensive, and we don't get paid! [NY]
• The non-billable time to collect labs is amazing. [UT]

Comments about specific OPAT programs
• 1200 OPAT discharges/yr, 200 followed by ID, 50 by Heme/onc/Tx. Rest are not under ID control.
Trying to get hospital administration to make OPAT service line for ID. [WI]
• Office based with nurse who I know and have trained give best quality and coordination of care [GA]
• Reliable monitoring and calculation of rates of side effects is difficult without a dedicated team. In the
1980s and 1990s our team met weekly to review all aspects of care. Our team consisted of the medical
director (me), 3 infusion nurses, 2 home care nurses, social worker, pharmacist, and secretary. Every
patient on the service was discussed. Problems were identified and addressed on the spot during the 1
to 2 hour meetings. [IL]
• At any one time, we follow as many as 250 pts or more in OPAT. We have 3 dedicated nurses who
monitor and look at every lab value and communicate that information to the attending ID. We see
each OPAT pt in the clinic every 2 weeks. We do labs every week or more often if unstable. Our RNs
communicate with LTAC RNS and PharmDs as well as the pts and their families. [KS]
• Lately, our hospitalists have decided to discharge patients on OPAT without ID consultation. This has
led to multiple complications, mostly due to lack of monitoring and outpatient oversight. Another new
problem is having hospitalists & surgeons consult the ID service on the day of discharge to set up and
manage outpatient antibiotics. [MO]
• Readmission to hospital for OPAT complications: office infusion (our ID office) <1%; home health care
~15%. [NJ]
• Our ID program and clinical consultation service enjoys a full and profitable working relationship with the home parenteral therapy program or HPTP) - we have a group of specially trained nurses in concert with our outpatient clinical pharmacists - the sterile preparation of the iv meds and the full setup including teaching with full telephone backup support is all in place - we use portable infusion pumps - we have a PICC (peripherally inserted central catheter) service to do the line placements - the line sites are changed with full dressing changes on a regularly scheduled basis for all patients - we have great statistics and we think our program to be one of the best in Canada. [AB]

• OPAT has become a huge and demanding service that our hospital administration and staff physicians currently take for granted but the hospital has not put enough resources into OPAT for the highest-level care for all patients, with >1/2 of our 1500+ OPAT patients/yr not followed in the ID Clinic, which leads to increased complications. We in ID are already overwhelmed, following >600/yr, but the patients we manage have a low rate of complications, especially readmissions, and generally do very well. Currently, we don't have enough docs or nurses to follow everyone, which I think should be the standard, but we have just made a formal business proposal to the hospital administration which, if accepted, could allow us to follow everyone needing OPAT. An aside, there has been far too little attention paid to the best forms of central access for OPAT patients -- one form does NOT fit all. [WI]

• We have the office RN in the telephone triage function also responsible for monitoring the fax for labs from non-hospital affiliated home health agencies and since all our labs are done on Monday (or Mon/Thurs if twice weekly labs are done) - the nurse can call the patient or agency if we have not received the lab. This system falls short of 100% in the completeness of capturing all the patients. Some patients are hard to track and never return for f/u visit so it is hard to be sure if therapy is completed. [NC]

• I don’t see patient after they are discharged from hospital. They are discharged to subacute facility if IV antibiotics are needed with specific instructions for length of treatment and labs, and the primary care physician handles thereafter. The ID physician at the subacute facility is available for evaluation or patient is readmitted to hospital with any problems with IV lines or signs of infection. [NJ]

• Most "recurrent" C diff does not meet criteria for re-treatment and can be managed without metronidazole or vanco. [VT]

• Our OPAT patients are managed by an ID physician in our facility /OR/

• ID consult before vascular access is encouraged. Formal consult not required but ID approval is. Thus, we get involved to the degree that we feel is necessary. We are consulted on most cases. [MN]

• For our institution - if any pt is sent to our infusion clinic, they must have an ID consult and the pt's labs are followed by our ID pharmacist and the ID physician who saw them. While we have few complications for pts followed by ID (either at home with IV abx or in our infusion clinic) - we sometimes inherit patients who were sent out by another provider after they have developed a complication from treatment. [WI]

• NPs at our outpatient ID clinic monitor lab values, report any abnormalities, phone calls from HH or infusion companies, or patient to specific ID physicians who are responsible for that patients. [TN]

• A system is essential; there are many ways to do it. Northern CA Kaiser has a dedicated pharmacy that does a superb job. If you don't have something like that, some kind of case management can go a long way toward preventing disasters. [CA]

• We are actually treating sicker patients with OPAT compare to what we were used to in the past. Multiple comorbidities such as renal insufficiency, endocarditis in diabetic patients, vascular insufficiency, multiple non or partly-consolidated opened fractures with secondary infections ( pseudarthrosis), immunodeficient patients on anti-TNF or other immunosuppressive agents, multiple resistant infections like pulmonary Mycobacterium abscessus infections, etc. So we foresee an increase complication rate in the future related to these co-morbidities unless we increase follow-up burdens with multidisciplinary follow-up. [QC]
• I have fewer problems with line occlusion on patient-delivered-care outpatients than inpatients. A well-instructed patient does better taking care of things at home than a visiting nurse or an inpatient nurse who see many patients a day and is stretched too thin. [OK]

• We have presented data on OPAT service at a large VA hospital at IDSA in 2008. To summarize: A total of 333 patients received 393 courses of OPAT for a mean duration of 21.1 days. Psychiatric (39%) and chronic kidney disease (31%) were common, and over half of our patients lived >20 miles from our medical center. Osteomyelitis (39.7%) and bacteremia (19.3%) accounted for the majority of OPAT indications. S. aureus (36.4%) was the most frequent infecting organism, and vancomycin (37.2%) was the most frequently prescribed medication. Complications, including hospital readmission, adverse drug reaction, or line-related complications were noted in 96/393 (24.7%) episodes, but most were either minor, reversible, or not directly related to the OPAT given. Serious line-related complications that required hospital readmission were noted in only 6 (1.5%) episodes. A more detailed accounting of these results will hopefully be published soon. [CA]

• Biggest problem with home infusion I have found is line infections in my VA population. [PA]

• Our VAMC is blessed to have an excellent nurse coordinator system in community based services who is my interface with the home health & pharmacy contractors and trouble shoots most problems leaving me to interact with our in house and community ID, Hospitalists & Ortho. [WA]

• In my experience, I have had the fewest complications when running OPAT through my own office with dedicated nursing staff who help me deal with PICC related complications and make sure that the appropriate labs are ordered and completed on a regular basis and also help me review the large number of laboratories. Since my office infusion center closed things have become much more complicated since multiple infusion companies are involved and not all of them are good about getting test results to the physicians that are responsible. [OH]

• We are not an inpatient facility but treat many of our patients with iv antibiotics for bronchiectasis exacerbation and NTM infection. Local patients are monitored by the ID physicians here. Out of state patients are monitored by their local providers. The majority of outpatient IVs are ordered by ID, but ID consultation is not necessarily required for other specialists. [CO]

• Events are rare. We have a good working relationship with the infusion and home health companies, which make identification and management of complications rare. My office personnel monitor labs and notify me of abnormal labs. Also, nursing home personnel communicate abnormal results in a timely fashion. [OH]

• Prior to opening our infusion center in 2007, we had no control and lack of communication over outpatients on IV therapy. Assuming responsibility (and getting paid for it) has allowed much better quality of care. Also, many patients who would require hospitalization just for IV therapy can be treated as outpatients without ever entering hospital. [CA]

• Having observed the evolution from prolonged IV ABX in the hospital to OPAT in various settings, I believe a well trained OIC staff with standardized ABX and infection control services provides a superior patient service versus the home setting, if possible for the patient. Obviously, this may not be true for all patients. [NE]

• In my area I feel there are not enough OPAT services and patients need to go to NH (if insured) or simply stay in hospital for weeks, (if uninsured). Home OPAT is not as frequent as NH antibiotic therapy, maybe because many of these patients also benefit from STR. There are companies providing hyperalimentation but unsure if they also provide antibiotics. [NY]

• I am lucky in that I work for an organization which promotes OPAT & supports the ID physicians. [CA]

• OPAT, given at a centralized infusion centre with ID oversight, is most easily available to patients seen in the ED in my centre - most inpatients receive OPAT at home and in a much less systemized manner. [MB]
• We do not need infusions to be done in ERs or infusion centers in our area - vast majority are at home, or in a long term care. There is mainly one home infusion company associated with our hospital. Our group takes care of 99% of the people who go home on IVs. Our safety record is quite good with minimal complications. [PA]

• If ID is not consulted prior to discharge then an attending on the responsible service must write the outpatient orders and monitor the patient. They rarely want to do that, so in practice 90% of cases are ID consults and managed by the ID service in conjunction with the ID pharmacist and the home health nurse. The infusion company pharmacists also monitor vanco blood levels and will make dose adjustments as needed; we set the parameters. [CA]

• We at one time had a nurse who as part of her job followed up on labs and made a good effort to get the patients in for weekly clinic visits, but our hospital cut her position as a money saving measure. [TX]

Who/What groups manage OPAT

• Beginning to see some hospitalist and primary care groups as well as surgeons sending people home with IV therapy. Truly concerned about their monitoring of patients including drug side effects. [FL]

• Too many podiatry, wound pts managed by N.P. or non MD practitioner without adequate knowledge of antibiotics and complications thereof. [OR]

• At our hospital anyone can order opat and often the patients are not monitored and or the opat itself was inappropriate in some way (indication, duration, etc). [MD]

• Our biggest challenge is not with OPAT per se but patients whose courses are overseen at SNFs after discharge. For these patients, an internist or family doc usually oversees therapy, often resulting in serious under-dosing of vancomycin for serious MRSA infections with disastrous consequences. ID has a hard time correcting this since we are not technically allowed to change orders at these SNFs per their own bylaws. Often we get no follow-up labs at all on these patients [PA]

• Hospitalists need to f/u on their patient post dc. "PCP" usually don't have a clue and ID MD are often excluded post dc from care. [CA]

• No infusion companies in Canada. Infusions are given by the patient or family in most circumstances, with a health nurse visit about once week, and others available as needed [BC, NS]

• It is a struggle getting appropriate care done for deserving patients with clear cut indications; however, many times I hear about "wound centers" giving antibiotics when there is either no infection or infection is so advanced that amputation is needed. Maybe we will be like the dentist or endodontist & furnish the xray or MRI or iphone picture of the wound. Also there are other infusions given that are not antibiotic related that end up as complications and infections. [MS]

• Although OPAT is safe in our (ID) hands, we see lots of misadventures from other services. Most are related to the fact that patients aren't seen/assessed until the end of therapy, so problems are magnified.

Laboratory monitoring/Use of specific agents for OPAT

• Labs may be monitored more frequently if they become abnormal or for some high-risk patients [IL, IA]

• If you google gentamicin you will get, as the first/top result, a law firm. [NC]

• Do not use aminoglycosides as an outpt / we do not allow OPAT aminoglycosides due to concern for AE monitoring / It is impossible to monitor ag safely as an outpatient [PA, CA, MA]

• I never send pt home on aminoglycoside. They have to go to nursing home. [OH]

• Almost never discharge patients home on aminoglycosides or amphotericin. [PA]

• I am not sure labs on beta lactams are particularly useful. Most beta lactam lab abnormalities have nothing to do with abx-usually with diuresis and gi bleeds. [MA]

• Uneducated OPAT providers are unaware of long term IV side effects, particularly cytopenias /CA

• The frequency of renal toxicities seems to be going up; also drug-drug interactions are encountered esp. with combination therapy including rifampin or FQ. [UT]
• We do not discharge patients on aminoglycosides—recipe for disaster. [NM]
• I do not discharge patients for home IV aminoglycoside therapy. (Complications related to such therapy resulted in the largest successful medical malpractice claim against a physician in Florida ~2006.).
• I routinely order for labs not to be drawn from PICC to reduce line clotting issues. I always order labs to be drawn on a specific day of the week (I like Tuesdays) to have a better chance of catching problems while everybody is working. I always see patients in follow up, among other things, to have a back up way to check on lab work, in case it didn't make it to my office. I always order for the hospital H/H order sheet to be faxed to my office, so we can keep track. I always specify Biopatch change with each dressing change. Despite everything, I still do not get labs, or get them incomplete, etc [GA]
• Restricted formularies require choosing a potentially more toxic option [LA]
• We hardly ever do amphotericin OPAT. If they are ill enough for ampho, they are ill enough to be in hospital. [MN]
• I have never discharged anyone on home ampho! Scares me a bit. [PA]
• Typically a pharmacist will monitor levels and renal function for patients on aminoglycosides and vancomycin. However, 8th nerve toxicity is very difficult to monitor on patients. If ID is not involved in the case, I fear that the monitoring is very fragmented and erratic since PCPs are often not that "on top" of patients discharged on OPAT by hospitalists. [OR]
• There is a need for guidance on frequency of lab monitoring for both OPAT and oral long term antibiotics. Which are the most valuable labs and how often should these patients be seen in clinic if they are stable. The other issue is in large county hospitals, the lack of standardization and because ID consults are not mandatory we end up seeing the complications in the ED when the patient comes back and ID is then consulted. [FL]
• Our OPAT system entirely discontinued using Vancomycin about a year ago due to high incidence of nephrotoxicity which we think was a combination of patients not following up in time for labs and therefore lack of dose adjustments. [TX]

Comments about need for OPAT
• I see vast over prescribing of OPAT in Louisiana. All sorts of non-bacteremic MRSA skin and soft tissue infections end up on OPAT. [LA]
• Too much OPAT being given or pressure for this by orthopedics and plastic surgeons. [MD]
• 1) PO Abx often suffice. 2) Since the duration of Abx is often arbitrary, i.e., not evidence based, some if not many pts don't need prolonged courses of Abx in the first place. [OK]
• Range of well-absorbed oral antibiotics makes OPAT unnecessary in many cases, but belief that IV is always better than PO persists. [LA]
• IV therapy is overrated and I do less of it as I have discovered that the key to effective therapy (after proper surgical care) is an appropriate antibiotic at the place of infection and this can often be done orally. With less PICC lines there are less PICC line related problems. [MA]

Other comments
• Intervventional radiology line placements are superior to RN/bedside placed lines. Volume of lab results - many repeated/duplicated faxes especially. [KY]
• We avoid using Power PICC units as the have a higher frequency of line occlusion during therapy than conventional PICC units. [MN]
• Have threatened to cut off treatment of patients who do not come in at least weekly to see the physician (not done yet) [SC]
• 1. Monitoring by practice home infusion straightforward. 2. Monitoring for home infusion secondary out of state very difficult and results often not forwarded in a timely fashion. [VA]
• Responsibility for out-of-area patients who may have been hospitalized at our trauma/referral center but return to home for OPAT is the greatest burden. Because patients are often unwilling to be seen back, we end up guessing about their true clinical condition. In addition, some facilities that are outside our geographic area are unwilling to take our orders since we are uncredentialed there. This requires having a willing PCP perform the orders under our direction, which often is poor quality. [OR]

• As we do not monitor this, the data entered is anecdotal. [NY]

• ECF/LTAC is a very common site of OPAT care for us. [OH]

• Relevant challenge in busy clinical practices [CA]

• ECFs are the biggest problem [IN]

• Glad you are doing this. There should be a strong recommendation from the IDSA that hospital helps to pay for a team in charge of these important and risky complications. [MA]

• Communications between home health providers and primary responsible physicians are KEY for success. For example, patient's body hygiene, keep the dog out of bed, keep the cat from scratching the PICC line dressing, etc. [MA]

• We are considering this a high priority area going forward and have done ongoing work in CQI to improve the system from all aspects. [UT]

• Lack of data re: outpt po therapy (eg., valganciclovir and voriconazole) make it difficult to arrive at standard recommendations/SOPs - we often enroll these pts in OPAT follow as we would for IV tx. [MA]