There was a very interesting article in the New York Times on August 21 by Michael Kimmelman: In Redesigned Room, Hospital Patients May Feel Better Already. The article focuses on a move by the University Medical Center of Princeton to redesign hospital rooms. And Kimmelman discusses a variety of issues associated with hospital design.

And there were a few aspects of the re-design that relate specifically to microbes. One makes a lot of sense to me – the positioning of a sink “in plain sight, so nurses and doctors will be sure to wash their hands, and patients can watch them do so”. It is critical that we as a society work to make sure that hospital personnel and visitors and patients wash their hands more often (and better) than they do now.

But then there was another microbe-related design issue that I find disturbing. This issue is from the following paragraph:

While smart design can reduce the chance of such errors, nobody claims that buildings cure disease. But how much each or any of the design moves in the University Medical Center of Princeton contributed to reducing pain or improving patient approval ratings is also not clear, which frustrates Barry S. Rabner, the hospital’s chief executive. He gave the example of antibacterial flooring, which cost $1 per square foot more than equivalent flooring without the antibacterial agent. “Sounds like a good idea,” he said. “So we did it. But that’s around a $700,000 difference. And where’s the evidence that it works?”

Wow. So they put in flooring that apparently was impregnated with some sort of antibacterial agent and they have no evidence that it works. This bothers me because it seems entirely possible that this would have negative, rather than positive, consequences. Mind you, I do not know if there are negative consequences of using antibacterial flooring but it is not too far fetched to imagine this is possible. There is growing concern about overuse of antimicrobial agents in many areas including medicine (e.g., see here), agriculture (e.g., see here), hand soaps, kitchen cleaners, and more. What is the problem with overuse of antimicrobials? Well, in general, there are two main issues people worry about — the evolution and spread of antimicrobial resistance and ecological disturbances to communities which in turn can have many negative consequences.

Sure – I am certainly in favor of keeping operating rooms as clean as possible. And I am certainly supportive of getting everyone involved in healthcare to clean their hands more often and not serve as vectors for movement of microbes in and around hospitals. But putting antimicrobial agents in hospital flooring – especially in patient rooms (as opposed to operating rooms) – seems to completely fail the
precautionary principle.

Alas this impregnating of building materials with antimicrobials is not just happening at this Princeton hospital. It is a growing trend. As with hospitals, this makes sense in some situations such as drug and food production facilities. But it scares me in other settings such as car seats, drywall coatings, clothing (also see here), shoes, and so on. Of course, I am not saying the microbial world out there is always in our favor. There are certainly microbes that can harm in all sorts of places. But it seems likely that there could be long and short term damage done by this “kill the germs” mentality applied to the whole planet. This is of course related to the absurd levels of germophobia we see in society today (see Katie Dahlhausen’s post on 50 shades of gross for a litany of examples). To protect ourselves (i.e., humans) and the plants and animals we care about as well as the planet, we need to have a more rational and careful approach to microbes. They can be good sometimes. They can be bad sometimes. They can be lots of things. But reckless and mindless attempts to kill all the microbes around us almost certainly will come back to haunt us.