

# Flu Commentary

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## MRSA Pneumonia and H1N1

MRSA and other “superbugs” are not new, are not an understated threat, and are not going away. The superbug’s emergence is a pure case of evolution: those that are hearty enough to survive the assault of a particular antibiotic develop a resistance to it. They must then be treated with a different antibiotic, often from a different family of agents. While this evolutionary process occurs naturally, mankind helps the process – to its detriment – by overprescribing, using antibiotics to treat viral diseases, and not completing the full course of treatment. This last factor helped contribute to the emergence of multidrug-resistant tuberculosis (MDR TB) and the (thankfully) rarer extensively drug-resistant tuberculosis (XDR TB). Individuals would begin taking medicine and in a couple of days start to feel better. Feeling better, they stopped the medicine. Unfortunately, the TB was not gone, only weakened and able to return with resistance to the original treatment.

MRSA pneumonia came to the attention of the CDC during the 2006-2007 flu season, when at least 24 young and healthy people died. We have seen an increase during ensuing flu seasons and the emergence of a rare spring flu – the current H1N1 outbreak – offers the opportunity for this trend to continue. While H1N1 has fallen off the front pages, it has not disappeared. The CDC estimates more than 100,000 Americans have contracted this flu and the recent death in New York City of an assistant school principal demonstrates a continuing health threat. It is important to recognize that many of the 36,000 annual flu deaths are due to related complications such as pneumonia; scientists believe this was a major factor in the staggering death rate during the 1918-9 pandemic.

There is a corollary here for the flu and the use of antivirals. While entirely different from bacteria, viruses also mutate in response to drugs to which they are exposed. For some influenza strains, antivirals have proven to be less than 50 percent effective. Drug-resistant strains of influenza do evolve. Any antibiotics or antivirals should be taken under the supervision of a healthcare provider and in coordination with guidance of local public health authorities. This also underscores the need for continuing preparedness and the maintenance of everyday precautions such as hand washing.