A series of recent cross-sectional studies have demonstrated that persons whose occupations involve exposure to swine and poultry may be at increased risk of zoonotic influenza virus infection. For instance, US swine confinement workers had an increased odds (OR=30.3, 95% CI=3.8-243.5) of having elevated antibodies against swine H1N1 influenza virus compared to non-swine exposed controls. Similarly, US veterinarians who reported working with poultry or waterfowl had an increased odds (OR=17.7, 95% CI=2.3-Infinity) of having elevated antibody against H7 avian influenza virus compared to non-poultry exposed veterinarian controls. A recent large prospective study of 805 US swine workers has corroborated these studies with swine-exposed subjects (OR=54.9, 95% CI=13.0-232.6) and their non-swine exposed spouses (OR=28.2, 95% CI=6.1-130.1) having an increased adjusted odds of elevated antibody to swine H1N1 influenza virus compared to non-exposed controls. The swine-exposed workers also had prospective evidence of swine influenza virus infection through self-reported influenza-like illness data, comparisons of enrollment and follow-up sera, and the isolation of a reassortant swine H1N1 virus from an ill swine farmer. Such occupations may serve as a bridging population for influenza virus spread between animals and man. Recent influenza modeling data have demonstrated that the intense occupational exposures of humans working in swine or poultry confinement buildings could facilitate the generation of novel influenza viruses, as well as greatly accelerate human influenza epidemics. This presentation will review such research and posit that swine and poultry workers should be considered for priority receipt of pandemic vaccines and antivirals.