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Zombie Epidemic Presents Stiff Challenge

This year's *BMJ* Christmas issue recognizes a medically neglected issue: the undead

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Forget Trump's health, Cruz's podium position, Obamacare, and Hillary's emails -- it's time the candidates got serious about the real threat facing America: Zombie Apocalypse.

Fortunately, we don't need to wait for Cato Institute study: Kent State University researcher Tara Smith, PhD is serving up all the evidence needed in a straight-faced review of "zombie science" appearing in *The BMJ*.

For the neophytes in the audience -- those who weren't checking medical journal TOC's last December -- Smith's study appears in the journal's famed Christmas issue (medicine's answer to Monty Python).

In the paper, Smith called for a global strategy to deal with the onslaught of zombies: "For the sake of humanity we must ensure ... that we work together as a unified global community to respond quickly to any and all new zombie threats."

Smith, an associate professor of biostatistics, environmental health sciences, and epidemiology, has worked hard to bring the issue of zombies to the forefront of national conversation. (Though some have criticized what they call a conflict of interest, since Smith admitted she has ties to the Zombie Research Society.)

Smith gave a detailed history of zombies to *MedPage Today*, adding that it's only a matter of time before politicians and others must make hard decisions about this, er, *grave* epidemic.

A Zombie History

In a performance that actor Sacha Baron Cohen might envy, Smith told *MedPage Today* by telephone and in the accompanying video that she has been interested in the science of zombies for several years because it's in her field of interest -- infectious disease -- and zombification (at least as described in "the literature," such as the 1968 film "Night of the Living Dead") is caused by some kind of infectious agent, insofar as they are transmitted to the living via bites, she noted.

Zombification symptoms may include a shambling gait, tendency to moan, loss of dexterity and prior personality traits, and the eventual rotting of flesh, she added, showing no hint that any of

this is a joke. "In rare cases zombies may be highly intelligent, self-aware, and lacking in the typical tendencies to bite and eat flesh."

The numbers of reported zombies appear to be increasing, although the exact reasons for that are unclear. Unfortunately, preventing and treating zombie outbreaks are two areas of difficulty, she said. "Very few facilities are set up to do experiments on something as aggressive and difficult to control as a live zombie," she said. "So we don't have any current vaccines that have been well-tested, and it's difficult to do so in the field because of the danger to researchers and physicians, and potentially to trial participants as well."

"The main treatment we have, unfortunately, right now, is amputation of bitten limbs," she told *MedPage Today*. "It's much easier to prevent a zombie apocalypse than try to step in and treat one as it's ongoing."

There have been tests of zombification treatments in which people receive medication doses that put the zombification on hold, "but that appears to be something they may have to take for a lifetime, so a missed treatment or [a problem] in production might cause zombification to proceed," said Smith.

There are also ethical issues that go along with treating zombification, all the way up to whether it ever becomes necessary to destroy the patient, she pointed out. "It's difficult because there are different types of zombie outbreaks; with some of it the incubation period is non-existent and the person gets bitten and zombifies without an extended illness."

"Other [cases are] more prolonged -- it may take up to a week before they turn into a zombie. So you need to have that in the back of your mind as well," Smith added. "Could you institute a local quarantine, or do something like Britain did and institute a nationwide quarantine? You have to think about what you have in place to take care of people during the incubation period, if any treatment is possible or whether you need to round them up and keep them separated before you could [treat] them or perhaps destroy them in the long term."

As to why no large effort to control the zombie outbreaks has evolved thus far, "It's difficult to sell, especially to politicians and world governments, anything that is not imminently important," she said.