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Project Inform Press Statement on the New York City Department of Health Report of a "Super" Strain of HIV

San Francisco – The New York City Department of Health and Mental Hygiene, in collaboration with the Aaron Diamond AIDS Research Center, released a press statement today reporting on a finding of man newly infected with a multi-drug resistant strain of HIV. The report described the man as being resistant to three classes of anti-HIV drugs and as having a particularly virulent strain of HIV. Although the transmission of drug-resistant HIV is a serious concern, Project Inform believes that the current reports may be unnecessarily alarming to the public. There is currently too little information available, and doctors have followed the patient for too short a time, to draw any conclusions about the significance of this situation. However, several aspects of the story being reported warrant further explanation.

First, there is nothing new about people becoming infected with resistant strains of HIV, including multi-drug resistant strains. Such cases have been reported at scientific conferences for the last several years. In a study reported in the Journal AIDS : Volume 18(10) 2 July 2004, author Douglas Richman reports that "… Resistance to all three drug classes was detected in an estimated 13.1% (of 17,300 patients) …" If triple class drug resistance is as common in the U.S. as Dr. Richman reports, it is likely that we will continue to see some portion of newly infected patients present with this level of resistance.

The advisory and press statement from New York City suggests that the patient is virtually untreatable, but this statement seems contradicted by other claims in the same report. The article says that the patient is responsive to the drug Fuzeon and may be responsive to Sustiva. If responsive to Sustiva, he is not "resistant to 3 classes of HIV medication" as claimed in the headline.

Another aspect of the reported case which is troubling is that the patient has a low CD4+ count. This was being interpreted as a sign of very rapid disease progression. However, it is common for people newly infected with HIV to have a period of low CD4+ counts and high viral load often lasting as long as 6 months after initial infection. Since the researchers involved suspect that the patient was infected in December 2004, it is not possible to determine at this time whether

the patient's low CD4+ count suggests a particularly aggressive form of HIV or whether it is simply a reflection of the short time since infection. Only longer follow-up will answer this question.

Another concern stated by the researchers is that the patient has what is known as a "dual tropic" form of HIV. This means that the virus can use either of two different secondary receptors on cells. This characteristic is usually associated with virus seen in people with advanced disease. At the very least, this means the patient acquired the virus from someone with an advanced form of the disease. There is as yet no evidence though that this means he will retain this form of the virus over time.

We believe that it is premature to conclude that this event represents evidence of a "superbug" or a particularly virulent strain of HIV, or that the patient is "untreatable" or will suffer a particularly rapid disease progression. These conclusions can neither be ruled in nor ruled out at this time. What's needed is an extensive period of follow-up and careful continued monitoring of the patient. In many previously reported cases of people presenting with multi-drug resistance, the characteristics of their virus changed over time and they were able to develop normal sensitivity to the available drugs.

HIV infection presents a complex mix of factors that determine the outcome in individual patients. These include the characteristics of the initial virus a person acquires, but also how a person's immune system responds to the virus, and in turn, how the virus evolves in reaction to the immune system and any drugs used to treat it. No single snapshot of data can accurately predict the course of disease for an individual.

Project Inform shares the concern of scientists and public health workers over the spread of resistant virus, but we also recognize how difficult it is to predict the significance of any individual case and what it may or may not mean for the at-risk populations. Every effort must be made to stop the spread of HIV, regardless of whether it is in drug resistant or drug sensitive form. We also believe that new information should be studied carefully and interpreted with caution and that care should be taken not to cause undue alarm when the facts are uncertain, as they are in this case.

Our understanding of the current situation is based on extended conversations with a number of AIDS experts and researchers, who like us, can only base their assessments on the limited information currently available. We strongly support the efforts of the New York City Department of Health and Mental Hygiene to continue following this case and to determine how frequently similar types of HIV transmission might be occurring.