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Fear-based appeals in HIV prevention

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You could argue that HIV prevention education in this country exists in the long shadow cast by the 'Grim Reaper', which appeared as part of a general HIV awareness campaign for less than three weeks in 1987. Focus groups[1] conducted to explore fear appeals in the context of the current epidemic, consisting (in part) of young gay men who were in their infancy when the Grim Reaper appeared on television screens and in newspapers, referred to it as the last campaign that they remember and certainly the last campaign that they believe had any significant effect in terms of HIV prevention. Yet, duplicating the widespread cultural impact of the Grim Reaper 'campaign' has not been possible, since AIDS no longer occupies the particular cultural space it did in the mid-1980s.

The gradual decline in HIV infections, well established by the end of the 1980s, continued in the 1990s and was regularly cited as the most direct measure of the success of both the political and gay community responses to the HIV/AIDS epidemic. It was also a testament to the partnerships that made it possible. The advent and widespread clinical application of antiretroviral therapy (ART) in the mid-1990s, along with diagnostic technologies, allowed for far more sophisticated approaches to harm reduction in relation to HIV.

Government and funding bodies understood 'safe sex' as code for responsible gay civic behaviour in consistently using condoms when engaging in anal intercourse. However, this was contingent on a very particular view of gay men that needed to be stringently adhered to and 'policed'. This view did not accommodate messy complexities regarding casual and regular partners, adventurous men, esoteric sexual practice, fluidity in decision making around unprotected anal intercourse, or the influence of alcohol or recreational and/or prescription drugs, let alone the tangle of emotions and behaviours brought forth by love and desire.

As social research and gay education articulated a language that moved beyong 'safe sex' (eg. 'negotiated safety' and 'sexual positioning') government disquiet has been growing. The increase in HIV notifications in the eastern states has been the catalyst for the tensions between government and community to be acknowledged openly. Policy makers and funding bodies are regarding the increases in HIV notifications as substantial proof that education strategies that have moved beyond the strictures of 'safe sex' have failed.

The sustained increase in HIV notifications, as well as increases in other sexually transmissible infections (STIs) in Victoria, has led some players in the HIV partnership to question the efficacy of current health promotion in relation to STI prevention efforts in general and HIV in particular. Social commentators, clinical practitioners, politicians and community leaders have suggested a return to a fear-based strategy in order to shock communities that they consider have become complacent about the threat of HIV and its consequences.

But the kind of 'fear appeal' campaign currently being proposed differs from the 1987 Grim Reaper campaign in one important regard. Health promoters are being urged to design a campaign that would graphically depict the toxic side effects of antiretroviral treatment. This would use the faces and bodies of people living with HIV to reinforce HIV prevention efforts by suggesting the appalling quality of life endured by these people, and how it might be avoided.

Quite apart from the potential for a campaign like this to have devastating effects on the health and quality-of-life outcomes for people living with HIV, there is considerable empirical evidence[2–8] to demonstrate that fear appeals in health promotion would not work, given the circumstances of the current epidemic.

A consistent theme of the published research is that fear appeals only reinforce *pre-existing health behaviours* if:

- the threat is present;
- there is a perceived susceptibility to the threat; and
- recommendations to avoid the threat are efficacious.[9]

However, fear appeals that are designed to change behaviours in 'unconverted' populations result in a process of motivated reasoning that discounts the source information, message information and message relevance, making them ineffective and potentially dangerous.[10] These three elements have the compounded effect of distancing individuals from the 'narratives' of fear-based social marketing. Displacing the target audience in this way reinforces powerlessness and futility.

A number of factors complicate the perception of susceptibility to ART toxicity. To feel vulnerable, HIV-negative men must imagine their own progression through a continuum ranging from risk behaviours for HIV transmission, to HIV infection, disease progression, taking ART and the development of lipoatrophy/lipodystrophy. Since the sense of vulnerability is further removed at each stage, fear appeals are likely to be interpreted as meaningless or irrelevant.

While the available literature clearly suggests that a 'fear appeal' based on the horrors of ART would not work in persuading HIV-negative men to maintain condom use, this same literature also argues that such a strategy would be likely to persuade HIV-positive men of the poor quality-of-life outcome of ART. A fear appeal would then also act as an effective barrier to the uptake of those therapies that are

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available to control HIV viral load and disease progression. It would do this by making HIV-positive men who take ART the group most susceptible to the perceived threat described by the campaign. This could result in:

- more HIV-positive men deferring, rejecting or poorly adhering to antiretroviral therapy;
- increased disease progression among HIV-positive men;
- a larger communal viral pool; and
- increases in HIV transmission.

The rejection of fear-based campaign approaches at this time is perhaps far more pragmatic than the current debate might acknowledge. Based on objective behavioural evidence, a fear-based campaign simply would not work to facilitate the desired outcome (of reducing HIV transmission) and could conceivably have the opposite effect of increasing HIV transmission. That is a frightening prospect.

References

1 The focus groups for this study were openly recruited using the gay press and consisted of four groups: HIV-positive and -negative men under 30 and over 30. They were shown copies of mocked-up press advertisements depicting the consequences of lipoatrophy and lipodystrophy in HIV-positive men who were taking antiretroviral therapy.

2 Ruiter, R. A. C., Abraham, C. & Kok, G. (2001). Scary warnings and rational precautions: A review of the psychology of fear appeals. *Psychology and Health, 16*, 613–630.

3 Witte, K. & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education & Behavior, 27*, 591–615.

4 Bell, R. (1999). Fear of AIDS: Assessment and implications for promoting safer sex. *AIDS & Behaviour, 3*, 135–147.

5 Kuppens, M. (1996). Fear arousing health persuasion: A dual process analysis. *Tijdschrift voor Psychologie & Gezondheid, 24*, 241–248.

6 Hale, J. (1995) Fear appeals in health promotion campaigns: Too much, too little, or just right? In E. W. Maibach & R. L. Parrott (Eds.), *Designing health messages: Approaches from communication theory and public health practice* (pp. 65–80). Athens, GA: Porter/Novelli Communications.

7 Field, B. & Wellings, K. (1996). Motivating behaviour change. In K. Wellings & B. Field (Eds.), *Stopping AIDS, AIDS/HIV education and the mass media in Europe* (pp. 56–59). London: Longman.

8 Keller, P. A. (1999). Converting the unconverted: The effect of inclination and opportunity to discount health related fear appeals. *Journal of Applied Psychology, 84*, 403–415.

9 *Ibid*, p. 403.

10 Kunda, Z. (1990). The case for motivational reasoning. *Psychological Bulletin, 108*, 480–498.

SRB 5/001

Blumberg, S. J. (2000). Guarding against threatening HIV prevention messages: An information-processing model. *Health Education & Behavior, 27*, 780–795.

Heightening vulnerability and fear are central components in most theories of health behaviour change. However, increasing fear and anxiety can have unintended consequences. Blumberg proposes an information-processing model of defensive responses with four stages: attention avoidance, blunting, suppression and counter-argumentation. 'Attention avoidance' is the indiscriminate avoidance of all messages, 'blunting' is the use of distraction to avoid only the threatening information in the message, 'suppression' is the containment of thoughts about the information and the avoidance of inferences about its personal relevance, and counterargumentation is the active rejection of vulnerability to messages through the strengthening of previously held opinions or impugning of the source. Although this model suggests how coping or defensive responses occur, it cannot predict when they will occur. However, the author concludes that working on recipients' ability or motivation to process threatening information may increase the effectiveness of interventions. Attention must be paid, however, to reducing all defensive coping strategies. Suggestions include using positively titled messages that emphasise the benefits of particular behaviours rather than the costs of others, engaging the audience in personal assessments of their own risk (by linking risk knowledge and personal behaviour), and dispelling myths by tailoring interventions to individuals or cultural groups.

SRB 5/002

Dahl, D. W., Frankenberger, K. D. & Manchanda, R. V. (2003). Does it pay to shock? Reactions to shocking and nonshocking advertising content among university students. *Journal of Advertising Research, 43*, 268–280.

The authors test whether shock advertising is more effective than fear or information-based campaigns. They include a typology of shock appeals that organises various norm violations under the categories of disgusting images (blood, odours, parasites etc.), sexual references (masturbation, nudity etc.), profanity/obscenity (swear words, racial epitaphs etc.), vulgarity (farting, nose-picking etc.), impropriety (inappropriate dress, manners etc.), moral offensiveness (victim exploitation, inciting violence etc.) and religious taboos (inappropriate use of religious symbols, rituals etc.). One hundred and five university students aged 18 to 27 were placed individually in a room displaying North American HIV/AIDS prevention posters that used either shock, fear or information appeals. After being called away from the room, 84% reported the shock posters as drawing their attention compared to 47% in the case of the information posters and 41% for the fear posters. Additionally, the shock posters were more memorable, with almost all of the participants recalling and recognising poster messages when prompted. A second study with 140 students examined how these effective shock appeals connected to behaviour change, finding that those people in a shock or fear condition were more likely to pick up HIV/AIDS information materials from a table of health education materials. The authors concluded that shock messages were the most effective way to ensure that messages would be recognised and remembered.

SRB 5/003

Das, E. H. H. J., de Wit, J. B. F. & Stroebe, W. (2003). Fear appeals motivate acceptance of action recommendations: Evidence for a positive bias in the processing of persuasive messages. *Personality and Social Psychology Bulletin, 29*, 650–664.

Das et al. test the hypothesis that fear appeals increase perceived vulnerability to a health threat, which then increases belief in recommended actions and motivation to change attitudes and behaviours. Three experiments were conducted with students at a Dutch university, focusing on vulnerability to stress-related health problems. The authors concluded that all three experiments supported the hypothesis, with the most persuasive messages being those that focused on vulnerability rather than the severity of the risk or the quality of the argument. That is, higher measures of perceived vulnerability were positively associated with behaviour change, including participants' intention to change, requests for further information and signing up for stress-management training programs. The authors concluded that individuals who felt vulnerable to a health risk would bias their appraisal of the evidence of that risk, and would be motivated by the negative emotions associated with vulnerability to take up the recommended behaviour change, whether or not they had previously had positive attitudes towards those behaviours.

SRB 5/004

Devos-Comby, L. & Salovey, P. (2002). Applying persuasion strategies to alter HIV-relevant thoughts and behavior. *Review of General Psychology, 6*, 287–304.

This review of the psychological literature summarises the factors contributing to the persuasiveness of messages in health communication. Some of the literature (such as protection motivation theory) looks at the cognitive components of threat appeals. Protection motivation theory suggests that threat appeals are effective if they are able to convince people that the consequences are undesirable (severity), the danger to them is real (vulnerability), they can avoid negative consequences by following the recommended action (response efficacy) and they have the ability to do so (self-efficacy). Only a small number of studies have looked at HIV campaigns. Results from these studies show that fear arousal does not necessarily lead to the adoption of health behaviours and in some cases it produces the opposite effect, possibly as a result of denial and helplessness. These studies also suggest that the focus of HIV prevention campaigns should be to elicit personal vulnerability rather than to increase levels of fear. Another unintended consequence of inducing fear is the possibility of producing other affective responses such as sadness and anger, as well as the ethical problem of

associating sex with fear. Although the review analyses interventions targeted at the individual level, the authors also highlight the importance of contextual, particularly structural, factors to enhance HIV prevention. The paper also includes a discussion of message framing, tailoring, and cultural targeting and specific factors related to the message, source and channels of communication.

SRB 5/005

Dillard, J. P., Plotnick, C. A., Godbold, L. C., Freimuth, V. S. & Edgar, T. (1996). The multiple affective outcomes of AIDS PSAs: Fear appeals do more than scare people. *Communication Research, 23*, 44–72.

Public service announcements (PSAs) about HIV/AIDS in the US have often relied upon 'fear appeals' to inspire behaviour change in the mass audiences of television campaigns. Dillard et al. conducted two studies to deduce whether other emotions such as surprise, puzzlement, anger, happiness and sadness were experienced when watching PSAs, and to consider how these unexpected 'affective responses' altered the impact of the message. The first study had 180 university students monitor their own emotions when watching 31 HIV/AIDS PSAs that included 'fear appeals'. While 61% of the PSAs produced a significant increase in self-reported fear, 97% produced changes in two or more affective responses, with increased reports of surprise, anger and sadness, and decreased reports of happiness and puzzlement. The second study examined how these emotions impacted on message acceptance, recruiting 167 (mostly female) university students to complete a questionnaire on their sexual activity, knowledge about HIV/AIDS and 'affective orientation measure' (the degree to which respondents' feelings guided their behaviour). The students were asked to write down the emotions they experienced while watching the 12 most fear-inducing PSAs from Study 1. The authors found that fear was a potent factor in ensuring that the PSA message was accepted and that surprise was also associated with message acceptance, perhaps because of the tendency to focus more closely on a message when surprised. However, puzzlement and anger inhibited message acceptance, suggesting that campaigns must be clear enough to avoid any uncertainty and tolerable enough to avoid provoking anger.

SRB 5/006

Donovan, R. J. & Henley, N. (2000). A conceptual framework for fear arousal and threat appeals in health promotion communications. *Health Promotion Journal of Australia, 10*, 84–88.

The authors conduct a review of the literature on fear appeals and develop a series of recommendations for the use of fear in health promotion communications. Firstly, they argue that health promotion must distinguish between Higbee's (1969) two types of fear: inhibitory fear (gruesome, graphic stimuli) and anticipatory fear ('this could happen to me'). They argue that 'threat appeal' is a more appropriate term than 'fear appeal' since behaviour change requires the cognitive anticipation of threat rather than the emotional experience of fear. The three major components of threat appeals are identified as negative outcome, contingent behaviour and source. A general threat (such as an impending cyclone) becomes a threat *appeal* (such as a request to evacuate) when a reliable source confirms that the negative outcome is contingent on engaging in a particular behaviour. The four main dimensions of negative outcomes are identified as physical (disease, disfigurement), social (shame, isolation), psychological (loss of self-esteem, sense of failure) and financial (unemployment, property loss). Finally, Donovan & Henley suggest that many factors influence how audiences engage with a threat appeal, including the perceived severity of the outcome, levels of familiarity with the issue and the ways in which individuals quantify the level of risk for their particular circumstances.

SRB 5/007

Higbee, K. L. (1969). Fifteen years of fear arousal: Research on threat appeals, 1953–1968. *Psychological Bulletin, 72*, 426–444.

Henley, N. & Donovan, R. J. (2003). Young people's response to death threat appeals: Do they really feel immortal? *Health Education Research, 18*, 1–14.

There is a widespread belief that young people feel immortal and are therefore immune to health promotion threat appeals, including the threat of premature death. The literature supports the idea that young people (especially males) are greater risk-takers but not that they are less concerned about death. The authors designed a study to look at types of threat (death threats vs. non-death threats) in response to literature showing that the *type of threat* is more important than determining the optimal level of fear that is effective. The study also considered whether younger people would respond in the same way as older people to death threats. The study was conducted with smokers in two age groups (16 to 25 and 40 to 50 years). Each respondent was exposed to one message about the threat of emphysema (either a death or non-death message). Responses were measured using a six-item scale. The study also looked at different dimensions of death: fear of one's own death, fear of the process of dying, fear of missing out on a full life, fear of causing death, fear of the death of loved ones, and fear of the effect of one's own death on others. They also investigated whether young people would respond less to death threats than to non-death threats. Overall there was no difference in responses to death threats and non-death threats in any of the age groups. However, within the older group there were some differences: women were more responsive to non-death threats than men but less responsive than men to death threats. This shows that 40- to 50-year-old men and women respond differently to death and non-death threats but in opposite ways. Younger smokers expressed a *higher* level of response to all threats than older smokers.

SRB 5/008

Montazeri, A. & McEwen, J. (1997). Effective communication: Perception of two anti-smoking advertisements. *Patient Education & Counseling, 30*, 29–35.

This article reports on a study which explored two different approaches to health education using mass media. A total of 394 participants (from three different age groups: 10 to 14 years; 16 to19 years; and 40 to 49 years) were shown two anti-smoking advertisements produced by the Health Education Board for Scotland (HEBS), one using a fear appeal and the other using a positive image. They were then asked to complete a short questionnaire of 18 questions which covered recall, perception and preferences. Overall, 52% preferred the fear appeal and 16% preferred the positive image. These preferences did not vary across age groups. However the *reasons* for these preferences did vary: the 10 to14 age group preferred the fear appeal because it was more realistic, the 16 to 19 age group preferred it because it was more appealing and the older age group preferred it because it had more impact. Seventy-nine per cent believed the fear appeal would have more impact on stopping people smoking and 59% of current smokers believed it would have more influence in terms of their own smoking. The authors suggest four main factors for understanding preferences: realism, clarity, simplicity of message and the thought-provoking nature and impact of the message. They propose that these elements could overcome the shock associated with fear appeals, leading to information processing and preference for the message. They call this the 'preference model'. This almost exclusive focus on preferences may be a limitation of the study.

SRB 5/009

Rigby, K., Brown, M., Anagnostou, P., Ross, M. W. & Rosser, B. R. S. (1989). Shock tactics to counter AIDS: The Australian experience. *Psychology & Health, 3*, 145–159.

Ross, M. W., Rigby, K., Rosser, B. R. S., Anagnostou, P. & Brown, M. (1990). The effect of a national campaign on attitudes towards AIDS. *AIDS Care, 2*, 339–346.

In 1987 a general HIV/AIDS awareness campaign, commonly referred to as the 'Grim Reaper' campaign, ran in Australian television and cinema. The community impact of this now infamous campaign was evaluated by comparing knowledge, attitudes and beliefs about AIDS from an Australia-wide survey conducted in October 1986 to a South Australian survey (n = 525) conducted in September 1987, five months after the campaign was launched. In the first publication of results, Rigby et al. found that 93.5% of respondents recalled seeing the campaign five months earlier, with 63.7% approving the use of shock tactics. Despite a dramatic increase in the number of phone calls to an AIDS hotline around the campaign launch date, this study also found that levels of personal and social concern about AIDS did not increase and that, in fact, personal concern among older people decreased. Similarly, knowledge about HIV and AIDS did not improve, apart from an increase in the number of respondents that believed blood transfusions were safe. The authors

identify a sub-group of respondents who claim they found the campaign particularly influential, however these respondents did not have improved levels of knowledge about HIV and AIDS and were more likely to support compulsory testing, suggesting that for some the use of 'fear arousal' may have inspired a 'panic reaction'. In the second publication, Ross et al. found that a greater number of respondents believed that more was known about AIDS and modes of transmission, despite not increasing their own knowledge. They also demonstrated a greater acceptance or tolerance of people living with HIV/AIDS, including the idea of mixing socially with such people. However, there was a concurrent increase in the belief that minority groups did not have to fit into society, which could indicate either a decreased imperative to conform to mainstream norms or a desire to segregate those believed responsible for HIV transmission.

SRB 5/010

Rosser, B. R. S. (1991). The effects of using fear in public AIDS education on the behaviour of homosexually active men. *Journal of Psychology & Human Sexuality, 4*(3), 123–134.

The effects of the Grim Reaper campaign on 77 from Adelaide, Australia, and 159 men from Auckland, New Zealand, were included in this analysis. The campaign was introduced in Australia (but not New Zealand) two months after the study commenced and this article reports on behaviour of the men in both study sites at baseline (two months before the campaign) and six months later (four months after the start of the campaign). At baseline the proportion of men practising safe sex was high and there was no difference between the two sites (79.5% in Australia and 74.7% in New Zealand). At six months follow-up, 82.7% of the New Zealand men (those exposed to the gay-sensitive material only) reported safe sex only (a significant increase) but the proportion of Australian men (those exposed to the fear-based program) reporting consistent safe sex had fallen dramatically to 47.7%, representing a 255% increase in unsafe sex. The authors argue that although this is only indirect evidence of the Grim Reaper campaign's leading to an increase in unsafe sex among these men, the fact that this was by far the most significant event to occur between baseline and follow-up in Australia but not New Zealand means that it is the most likely explanation for the change. This study suggests that not all AIDS education is beneficial and that some education may indeed have serious, negative consequences on behaviour change.

SRB 5/011

Ruiter, R. A. C., Abraham, C. & Kok, G. (2001). Scary warnings and rational precautions: A review of the psychology of fear appeals. *Psychology and Health, 16*, 613–630.

Ruiter, R. A. C., Verplanken, B., Kok, G. & Werrij, M. Q. (2003). The role of coping appraisal in reactions to fear appeals: Do we need threat information? *Journal of Health Psychology, 8*, 465–474.

In a review of the psychological literature on fear appeals, Ruiter et al. (2001) conclude that there is little evidence that fear appeals contribute to the adoption of self-protective behaviour. Indeed, fear arousal may even inhibit motivation to change through fear-control processes such as avoidant coping. Instead, messages are likely to be more effective if they include precautionary information and reassuring messages of the feasibility of taking preventive action. Ruiter et al. (2003) then apply this theory to the issue of breast self-examination (BSE). The study recruited 130 female university students who were shown messages about breast cancer that included either a low or high level of threat, and then detailed explanations about how to conduct a BSE. The low-threat message described the risk of breast cancer as highest among women over 50, including scientific diagrams of cancerous cell division. The high-threat message included images of mastectomies and footage of a young woman describing (fictitiously) that she discovered her own breast cancer after participating in the study the previous year. Viewing the high-threat message resulted in the adoption of one or more of the three measures of fear control (defensive avoidance, message derogation, perceived manipulation) while viewing the low-threat message resulted in coping appraisal, suggesting that fear appeals must be used with caution and should always be accompanied by evidence of the feasibility and effectiveness of the recommended action.

SRB 5/012

Tudor, A. (2003). A (macro) sociology of fear? *The Sociological Review, 51*, 238–256.

Fear has traditionally been explored as a psychological emotion but in recent times it has also become of interest to sociologists. This is partly because of the temporal dimension of fear—the expectation of a negative outcome. This dimension extends the range of phenomena to which fear is usually applied from the immediate physical experience to an anticipated future state of affairs. Fear is also important because the concept itself is central to other significant themes in modern social and political theory, namely 'risk' and 'trust'. Tudor reviews that sociological literature on fear including the concept of a 'culture of fear' which suggests that risk management has become a defining feature of contemporary society. Recent sociological examination of fear has concentrated on the concept of a 'culture of fear' which suggests that risk management has become a defining feature of contemporary society. Tudor calls for an examination of the links between a culture of fear and everyday activity, and constructs a model of fear comprising six 'analytically distinct' classes of variables or parameters: environments, cultures, social structures, bodies, personalities and social subjects. The first three relate to the macroscopic features of the fear environment to which we (as social agents) must relate. The latter three relate to agency rather than structure and provide the basis on which social agents negotiate the terms of fearfulness.

SRB 5/013

Witte, K. (1997). Preventing teen pregnancy through persuasive communications: Realities, myths, and the hard-fact truths. *Journal of Community Health, 22*, 137–154.

Witte, K. & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education & Behavior, 27*, 591–615.

Witte, K., Berkowitz, J. M., Cameron, K. A. & McKeon, J. K. (1998). Preventing the spread of genital warts: Using fear appeals to promote self-protective behaviors. *Health Education & Behavior, 25*, 571–585.

In a review of the literature, Witte and Allen conclude that fear appeals are persuasive when accompanied by messages of efficacy that convince people they are capable of averting the threat. Witte (1997) applied this to the issue of preventing teenage pregnancy, conducting six focus groups with 21 teen mothers who argued forcefully for a hard-line 'realist' approach to sex education, in the form of peer education, celebrity endorsement and telephone hotlines. However, Witte observes that since many teenage girls have positive associations with child-rearing, fear appeals need to focus not on the threat of pregnancy but on the physical and emotional stress of parenting and the threat of losing social life. Another study by Witte et al. (1998) examined the prevention of genital warts or human papilloma virus (HPV), demonstrating that fear appeal campaigns can have unintended consequences. Witte recruited 219 female students at a large US university, who randomly received either 1) a fear appeal campaign and questionnaire; 2) a fear appeal campaign only; 3) a questionnaire only. The authors found that those who had received the fear appeal campaign felt at greater threat of contracting HPV and that those who were considered to have a high degree of self-efficacy (as measured on the questionnaire) had more positive attitudes towards using condoms. However, those who did not feel themselves vulnerable to HPV failed to respond to the campaign's fear appeals, thus supporting the argument that fear appeals will only work if accompanied by evidence of susceptibility to the threat and a recommended course of action to reduce or remove the threat.

Glossary

ART	Antiretroviral therapy
STI	Sexually transmissible infection

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