On the edge of the HIV mental health spectrum are crises that require immediate intervention complicated by substance use, pre-existing mental illness, and suicide. A good example is the experience of Philip, a 34-year-old seropositive man.

Being clean and sober for eight months was a triumph for Philip but it made his depression all the more confusing for him. When he started to feel suicidal, he ended up at the HIV mental health crisis clinic. The crisis team began by arranging a brief psychiatric hospitalization and then worked with hospital staff to prepare Philip for the transition back to daily life. Once Philip was discharged, a team social worker helped him develop a plan to manage his difficulties, including helping him find free psychotherapy and a substance abuse support group near his home, and the team psychiatrist initiated antidepressant treatment. Philip’s long history of depression suggested a biologic component, but this was exacerbated by social problems—uncertain housing and the loss of disability insurance—that had overwhelmed his internal resources. During his five weeks of crisis care, Philip was connected to a therapist for brief psychotherapy, an HIV benefits counselor, a job placement service, and most importantly, ongoing case management services.

During the past two years, the San Francisco-based AIDS Health Project’s HIV Mental Health Crisis Team has seen more than 1,250 crisis clients, many of whom presented with problems similar to Philip’s. The multidisciplinary team consists of two full-time social workers, a half-time nurse, and a half-time psychiatrist. The team is well-positioned within a larger HIV-specific mental health agency, ensuring easy access to other services including psychotherapy, support groups, and substance abuse treatment, and facilitating additional staffing as dictated by the number and severity of client cases.

Being In Crisis

Clients are considered to be in crisis when they reach the limit of their ability to manage their psychosocial situation. In extreme cases, they can become a danger to themselves or others. People with HIV are at risk of developing mental health crises for a variety of medical and psychosocial reasons. HIV-related medical conditions, for instance, toxoplasmosis, cryptococcosis, or HIV encephalopathy, may lead to mental status changes. Psychosocial challenges such as the stigma of HIV disease, the emotional impact of an uncertain and changeable disease course, the use of street drugs, and the effects of HIV disease on relationships can push clients beyond their limits to cope.

Clients describe the experience of crisis as being stuck between a rock and a hard place. The variety of mental health crises have one common denominator: there is at least one part of the clinical story that the client cannot resolve by him or herself. This shortfall may result from a lack of either external support or internal resources, so the goal of crisis intervention is to respond by both bringing external resources to bear on the problem and helping the client bolster his or her internal defenses. This two-pronged approach may require clinicians to work more actively than is usual in client-centered counseling, for example, clearly directing clients to substance treatment.

Ideally crisis intervention is achieved within the context of a team. Solo mental health providers often feel too isolated or without sufficient resources to handle the chaotic, time-consuming process associated
Editorial: It’s a Crazy World

Robert Marks, Editor

Mental health is invisible to most people, because most people believe as a matter of course and nature that everyone is healthy. If I am not mentally healthy, I am considered to have a serious mental illness, and many will dismiss me as “crazy”: fundamentally and, on some level, absolutely, dysfunctional. There is very little room within these constrained definitions for less grave issues such as emotional support, life decision-making, interpersonal relationships, and death and dying, issues that comprise the focus of much HIV-related therapy.

From within the epidemic, the vision of mental health is limited in a different way. Mental health is often synonymous with psychological support: helping otherwise functional people deal with the upside-down world wrought by a natural disaster. In this world, people are mentally healthy or mentally unhealthy—that is, challenged by tremendous outside stressors—but never mentally ill, and mental health care is about coping with these stresses.

When challenged to think about our assumptions, I know that most people allow for a broader spectrum to define mental health and mental illness. But in the everyday world in which words define the way we think, labels can oversimplify reality to the extent that these linguistic shortcuts determine our responses. George Harrison and John Harbison remind us in this issue of FOCUS that people with mental illness that predates their HIV infection are very much a part of the population of people drawn into the epidemic. As with most seropositive people, these individuals live lives of chronic unease that sometimes flare into crisis. Harrison observes, people with HIV come to a seropositive world having spent most of their lives being seronegative, and the challenges they present are very much the challenges most people with mental illness present: “just more so” as he said to me. If the AIDS Health Project’s experience is any guide, the recent antiviral drug successes will not translate to fewer or less severe mental health crises among people with HIV disease. And Harbison’s article demonstrates that people with chronic mental illness also remain at high risk for HIV disease. No matter how we perceive mental health in the context of societal norms, it is clear that mental illness only complicates the care of people with HIV disease and the prevention of new infections.

with a client passing through a crisis. While the individual counselor may have a much deeper appreciation of how the crisis fits into the context of an individual’s psychology, he or she may also feel inhibited in action or style of intervention because of the preexisting therapeutic relationship. It may be particularly challenging for practitioners to incorporate an involuntary psychiatric hold into the context of what has previously been voluntary treatment. The crisis team instead works on the problem at hand with the history in the background. This approach enables the team to step in to provide time-limited, directed care focusing on the client’s reactions to a stressor and on rapid implementation of an active treatment plan.

The crisis team should be composed of providers representing the range of aspects of the biopsychosocial approach that will be necessary for treatment. Clinicians with cross-training are particularly valuable in this work. For example, social workers who have psychological grounding can assist in the dual goals of strengthening the client’s ability to cope and linking him or her to other services. Psychiatrists or psychiatric nurses can combine knowledge regarding both the medical aspects of psychiatry, such as psychopharmacology and knowledge of the effects of HIV on cognition and mood, and the psychosocial aspects of HIV disease, for example, living with a life-threatening and stigmatized disease.

The Assessment

Crisis interventions are not that different from other sorts of mental health work; they are simply more intense and focused. Clients present with more acute needs, create more “drama,” generate more complex legal issues, and involve more staff time and interaction. The trick is to find ways to diminish the impact of these demands so that the client can continue to function day-to-day. First, the clinician should be prepared to support a client’s need to process his or her experience and at the same time to bind the client’s anxiety by providing external structure.

In the process of performing a focused clinical assessment, the clinician explores the client’s experience of being “stuck.” For example, the clinician should ask the client about how the crisis came to be, how long things have seemed problematic, and the ways in which his or her internal resources have failed. Most importantly the assessment should evaluate client safety issues,
Implementing Treatment

Formulating and executing a treatment plan requires as much attention to action as it does to emotion, that is, expedient linkage to ongoing care as well as empathic support. To achieve this, mental health providers may need to be more active than they usually are in offering clients potential solutions. The treatment plan may include both immediate interventions aimed at helping clients define and focus strengths as well as short-term, crisis-oriented case management. Clinicians need to be comfortable operating along the continuum ranging from active listening to active intervention, for example, arranging emergency housing for the client. Prior to ending a first encounter, clinicians should seek to structure the client’s life until the next meeting, generating a strategy covering housing, food, social support, and substance use.

While some crises resolve after a single visit, many extend over a period of days or weeks. During this time, frequent visits allow for aggressive case management and assessment of the success of the treatment plan. In addition to psychological and psychosocial work to diminish the crisis, a critical aspect of ongoing care is preparing clients for the end of crisis care. It is important to make it clear to clients that as they improve, there will come a time when they will no longer require crisis services and, to sustain improvement, will want to continue with other therapeutic alliances established during the crisis intervention.

The decision of whether an intervention will involve one or several clinicians on the team is determined by the type of stressor a client faces and his or her reaction to it. For instance, if a client has significant paranoia as a result of extended amphetamine use, fewer clinicians should be involved in care. Conversely, if it appears that a client, who is likely to be linked to another agency, may become overdependent, the use of several clinicians would discourage an overly close relationship with any one staff member.

Since seropositive clients often receive services at other local agencies, it also expedites intervention to involve clinicians from these agencies in the treatment plan. For example, for a client who becomes suicidal because of a housing crisis, reconnecting the client with the housing advocate he or she had been working with may help to stabilize the situation. In this way, it is important to remember that crisis occurs in the context of preexisting circumstances and that modifying these circumstances is crucial to effective intervention.

Complicating Issues

Three issues, in particular, complicate crisis care: resistance to appropriate care, unresolved psychological issues, and medical complications. First, while most clients agree to the treatment plan, a significant portion resist or disagree with the planned intervention, thus endangering the therapeutic alliance. For example, a bipolar patient may be unable to appreciate the impact of her illness on her decision-making capacity. If she is still able to provide food, clothing, and shelter for herself, she would not meet the “grave disability” criterion for a psychiatric hold. But, without intervention she may continue to operate dysfunctionally and lose her job or risk damaging significant relationships.

Second, when a client’s current concern resonates with unresolved psychological issues, treatment becomes more complicated. For example, a dependent 25-year-old gay man becomes suicidal upon learning he is HIV-infected. After interviewing him, it becomes clear that he has never resolved his grief about the deaths of two boyfriends and that he is terrified his friends will desert him, reacting just as he had when his boyfriends became ill. To this mix is added his barely acknowledged rage toward those he believes infected him, the result being a log jam of immobilizing dynamic issues. After contracting with the client so that he will not attempt suicide without first calling the clinician, the clinician develops a treatment plan that includes psychopharmacological drugs and brief, intensive therapy, as well as arrangements for longer-term therapy.

Third, clinicians must be savvy about the way in which health and HIV-related diseases play a role in the crisis. In particular, clinicians should have an understanding of the common opportunistic infections and their psychoneurologic presentations in order to develop a differential diagnosis. For instance, a provider seeing a 30-year-old woman with symptoms of mental slowness, confusion, and apathy may simply diagnose this as a mood disorder. But this conclusion would overlook the possibility of HIV-associated dementia or an acute encephalopathy from another viral source. Another example regards the dosage of tricyclic antide-
pressants, which when given concurrently with the protease inhibitor ritonavir, can lead to anticholinergic reactions. The principle when prescribing any psychiatric medication for a seropositive client is to “start low and go slow.” In other words, the clinician must be sensitive to the appropriateness of lower dosing and a slower introduction of psychoactive drugs.

Substance Abuse and Drug Interactions

HIV-related crisis work often lies at the intersection of substance use and mental health. For substance users, a crisis may manifest in the context of the medical complications of use or in terms of requests for drug rehabilitation. In response, crisis workers need to be able to treat these conditions in an integrated way. Among the medical problems that trigger substance abuse-related crises are: intoxication and withdrawal syndromes, mental status changes, and mood-related or psychotic syndromes. In these cases, it is crucial to rule out the medical causes of symptoms. For example, it is wise to consider the possibility of mental status changes from toxoplasmosis even though a psychotic client has a recent history of heavy speed use. Diagnostic tools that consider the variety of causes for symptoms are particularly useful in navigating this complexity.

Some substance users who are hitting “bottom” may actively seek treatment for their addiction; others may want only symptom relief for psychosis or sleep disruption. Since there is no uniform policy regarding the mental health and psychosocial treatment of substance users, crisis team clinicians from different disciplines may disagree about how to best treat actively using clients. Even if there is agreement within the crisis team, agencies to whom clinicians refer clients may have conflicting policies about treating active drug users.

When a crisis occurs for an addicted client, the opportunity for referral to drug rehabilitation may seem compelling. The clinician may consider treatment as a way for the client to become “unstuck,” to get beyond the crisis. In such cases—considering the shortages of drug treatment—clinicians need to be particularly adept at linking their clients to other services. Significantly, the commitment to addiction treatment must come from the client and be continually reassessed. This is among the clearest examples of when clinicians may find themselves wanting more for their clients than their clients want for themselves. It is particularly challenging to remain sensitive to clients’ inclinations at these times.

Conclusion

Every day, crisis workers see people at their worst, circumstances that may desensitize clinicians, making them less emotionally responsive, burning them out. But, it is possible to conceive of this difficult reality in a different way. Because of their experiences, clinicians actually “burn in.” Having worked with scores of individuals, counselors become expert in dealing with clients in varying states of crisis. As crisis becomes a familiar experience and a predictable process, burn-in instills a sense of mastery and fosters an almost intuitive response.

Emily Leavitt, coordinator of AHP’s Mental Health Crisis Team, sums up crisis work in this way: when things speed up, it’s time to slow down. This is a common sense reminder to step back from the action, collect information, confer with colleagues, formulate or revise treatment plans, understand legal obligations, and avoid becoming too invested in one version of a crisis without seeking other perspectives. It is a combination of this stepping back and experience that enables crisis workers to decrease the drama and provide clinically appropriate care.

Clearinghouse: HIV and Mental Illness

References


People with chronic mental illness are clearly at greater risk for HIV disease and research shows that they are more likely to participate in risky behaviors and to be HIV-infected than the general population. This article reviews the literature on seroprevalence, risk, and knowledge and behavior, and offers suggestions for treating seropositive people with chronic mental illness.

Seroprevalence and Risk

In general, people with chronic mental illness have higher rates of HIV infection than people in the general population. For example, one recent study found a 5.5 percent seroprevalence rate among 451 psychiatric admissions to two New York City hospitals compared to a rate of 2.9 percent for the general population. Similarly a survey of 533 patients admitted to a Maryland state hospital found a 5.8 percent seroprevalence rate. In addition, half of the seropositive patients were women, significantly higher than the 11 percent figure for the general population.

Among people with chronic mental illness, as in the general population, seroprevalence is higher for injection drug users and men who have sex with men. In the Maryland study, 36 percent of women and 15 percent of men who had a history of injection drug use were HIV-infected, and sharing needles is the most common route of infection among people with chronic mental illness. The Maryland study also found that 15 percent of the men who had sex with men were HIV-infected. Notably, homosexual behavior may also be more prevalent among people with chronic mental illness than people in the general population: of 150 paranoid schizophrenic males, 37 percent had had sex with other men.

Homelessness is common among people with chronic mental illness and is, in and of itself, a risk factor for HIV infection and HIV progression. Of the three million homeless people in the United States, up to 40 percent have been diagnosed with major mental illnesses and up to 60 percent abuse drugs and alcohol. In the Maryland study, homeless people with chronic mental illness had seroprevalence rates of 10.1 percent versus 4.8 percent for those who had housing. Homeless people with chronic mental illness are also more likely to be injection drug abusers.

People with chronic mental illness may be more likely than others to have been sexually abused, and sexual abuse may represent a significant risk for HIV infection in this population. The psychopathology that is often associated with a history of childhood sexual abuse may lead to impulsive sexual behavior with many partners. In addition, people with histories of sexual abuse often display patterns of involvement in abusive relationships and may be more vulnerable to victimization. Rates of homelessness are higher among young people who have been sexually abused in childhood.

Finally, researchers have found no major differences in seroprevalence rates among major diagnostic groups. However, common symptoms of mental illness may place people with chronic mental illness at increased risk. Schizophrenia, affective disorders, and severe personality disorders, for example, are often associated with poor judgment, cognitive impair-

Researchers find no major differences in seroprevalence among psychiatric diagnostic groups, but common symptoms of mental illness may increase HIV infection risk.
ment, impulsivity, hypersexuality, self-destructive behavior, and unstable emotional expression. These symptoms are exacerbated by drug and alcohol abuse, and substance abusers with chronic mental illness, the "dually diagnosed," are at increased risk of HIV infection.

Knowledge and Behavior

A 1994 study found that mean scores on a standardized questionnaire of HIV-related knowledge, attitudes, and risk behavior were significantly lower for the 54 mentally ill clients of California program than for a group of high school students. Thirty percent thought HIV could only be transmitted sexually, 60 percent thought it could be contracted by donating blood, and one-third believed it could be contracted by sitting on a contaminated toilet seat or drinking from a contaminated glass. Respondents also expressed disturbing attitudes about high-risk behaviors. Approximately one-third said that injection drug use was acceptable, that AIDS would not influence their choice of sexual partners, or that they were ambivalent about the use of condoms.

To begin to respond to increased risk among people with chronic mental illness, evaluation of mentally ill clients should include routine screening for risk factors, risky behaviors, and any signs or symptoms that might suggest active HIV infection. Clinicians should assess for cognitive impairment, neurologic signs, and medical signs such as fever, weight loss, dermatologic problems, or lymphadenopathy. Individual clinicians, psychiatric treatment centers, and substance abuse programs need to provide education and individual counseling about HIV-related risks, transmission, and treatment, and integrate them with sex education. Given the high rates of substance abuse among people with chronic mental illness, clinicians should attempt to engage clients in the recovery process, and mental health programs should include an integrated dual diagnosis tract. For additional support, clinicians should encourage parallel treatment in 12-step or other substance abuse programs.

HIV Care and Chronic Mental Illness

Care for seropositive people with chronic mental illness is no less complicated than prevention for this population. In general, acute psychiatric symptomatology and active, heavy substance abuse must be controlled before a seropositive, mentally ill client can be engaged in effective medical treatment. In addition, it is critical to stabilize housing, which is integral to medical and psychiatric treatment.

Psychosis, cognitive disorganization, dementia, impulsivity, and poor judgment may limit the capacity of clients to manage complex medication regimens, and clients with cognitive impairment, in particular, require structure, monitoring, and support to sustain adherence. Given these challenges, individualized and intensive case management is an economical approach for providing effective medical and psychiatric treatment to people with chronic mental illness. Case managers are uniquely placed to promote effective communication among members of the treatment team. In addition, supported housing with the capacity to dispense medications, in-home care such as visiting nurses, and prepackaged medication organizers are useful tactics for promoting and monitoring medication compliance.

Conclusion

People with chronic mental illness, particularly those who are homeless or who use substances, are a neglected and disenfranchised population at high risk of HIV infection. Their needs can be immense, and they face multiple obstacles to treatment. Identification and screening of clients at highest risk and education and counseling to respond to unsafe behaviors are approaches that should be integral to the programming of community mental health centers and crisis clinics. Successful treatment of HIV disease among people with chronic mental illness requires future research. Given the growing availability of effective medications and treatment modalities, both individuals and institutions need to encourage not only further study but also a coordinated and compassionate response.

References


Authors

John D. Harbison, MD is Medical Director of the Bridge to Wellness Partial Hospitalization Program at San Francisco General Hospital and Assistant Clinical Professor of Psychiatry at the University of California San Francisco.
**Recent Reports**

**HIV Risk and Mental Illness**


A comprehensive review of Australian and U.S. literature on mental illness and HIV disease found high correlations between HIV-related risk and mental illness, and poor understandings among the mentally ill of the relationship between risk behaviors and HIV infection.

Since the chronically mentally ill are less likely to have a medical problem diagnosed, and if diagnosed, less likely to be adequately treated, they are less likely to receive HIV antibody testing. At the same time, health care providers may be reluctant to burden people whom they perceive as already stigmatized with the additional stigma of an HIV diagnosis.

People with mental illness are viewed as asexual, an assessment true of only some psychiatric disorders, and so are perceived as being at lesser risk of HIV infection. In one study, 44 percent of subjects with schizophrenia were sexually active; of these, 93 percent reported only occasional condom use, 62 percent had many partners, 50 percent exchanged sex for goods or services, and 45 percent combined sex with drug or alcohol use. Another study found that 18 percent of 95 people with chronic mental illness had exchanged sex for money or drugs, and this was more common with people with personality disorders, who were more likely to report non-consensual sex.

Several other studies have found high rates of risk among various populations of psychiatric patients. Unsafe homosexual or bisexual behavior was reported among 51 percent of people with borderline personality disorder in one study and among 14 percent of those with mania in another. In a study of 71 women with borderline personality disorder, 46 percent had impulsively entered into sexual relationships with partners they scarcely knew. A study that was unable to correlate specific behaviors with specific psychiatric diagnoses did find that only 10 percent of subjects used condoms consistently during heterosexual sex, and 20 percent reported a history of injection drug use.

Homeless people who are mentally ill appear to have an even greater risk of HIV infection because of their vulnerability to sexual and physical abuse. Mentally ill adolescents are at particular risk because adolescence is typically a time of sexual and drug risk-taking, and this is exacerbated by impaired judgment, hypersexuality, recklessness, and impulsive behavior.

Finally, despite high rates of risk, HIV-related knowledge among people with mental illness is low. Compared with a control group from a general medical clinic, 80 women with psychiatric illness had significantly poorer knowledge about HIV risk; and this study found that knowledge was unrelated to cognitive function. In a subgroup of the study, nearly half of 49 women diagnosed with schizophrenia, most of whom were sexually active, were unaware that condoms would prevent HIV transmission.

**Psychopathology in People with HIV Disease**


A review of the literature on suicide, suicidal ideation, and psychopathology in Spain confirms that substance abuse and psychiatric illness are linked among people with HIV disease, and suggests that suicidal ideation and behavior may be associated with pre-existing psychopathology.

In Spain, this is an area of research that has been particularly neglected despite the fact that the country has the second highest number of reported AIDS cases in Europe (more than half of which are related to injection drug use). Researchers reviewed several studies based on anonymous seroprevalence tests and retrospective chart analyses of people with HIV disease who were referred for psychiatric evaluation.

Within Spain, studies have found seroprevalence rates on acute psychiatric units to range from 5 percent to 7 percent. Studies of homeless psychiatric
patients and people in alcohol rehabilitation reveal higher rates.

In a study of 107 people with HIV infection, 44 percent were diagnosed with psychoactive substance abuse and 12 percent with adjustment disorder with depressed mood; 14 percent had a depressive syndrome. Another study of people with AIDS treated through a psychiatric consultation service identified the following psychiatric diagnoses among 100 subjects: psychoactive substance use (51 percent), adjustment disorder (15 percent), and delirium (12 percent). Ten percent of the subjects had attempted suicide in the past, and such increased risk of suicide may be related to the higher prevalence of psychopathology among populations most at risk for HIV disease.

Another study suggested that people with severe mental illness are at higher risk for HIV infection because psychopathology is often linked to substance abuse, which can exacerbate and even trigger psychotic episodes. In addition, people with chronic mental illness may be more prone to casual or coercive sexual relationships even if they do not exhibit inappropriate sexual conduct. They also tend to live in poorer neighborhoods with high rates of substance abuse and sexually transmitted diseases.

Finally, in a study of 492 psychiatric inpatients who reported being seronegative upon admission, there was a statistically significant relationship between past suicide attempts and the presence of at least one HIV-related risk behavior. While 34 percent of the patients with no reported HIV risk had attempted suicide, 63 percent of the patients who reported HIV risk had attempted suicide.

Seroprevalence and Dual Diagnosis


Nearly one out of four substance using inpatients in a New York psychiatric emergency room was HIV-infected. Subjects with depressive disorders were more likely than subjects in other diagnostic groups to be seropositive.

During a four-month period, researchers recruited 118 sequential emergency admissions with both substance abuse and psychiatric diagnoses. They tested the subjects for HIV antibodies and interviewed them about their medical, psychiatric, and drug-use histories as well as their high-risk behaviors. Most of the subjects were men, and 31 percent were diagnosed with schizophrenia or schizo-affective disorder, 16 percent with bipolar disorder, 14 percent with a depressive disorder, and 39 percent with other disorders.

While 23 percent of the subjects tested HIV seropositive, fewer than half of these (11 percent of the total sample) were aware of their serostatus. Of these 13 subjects, nine had taken an antiviral drug. Black and Hispanic subjects had higher seroprevalence rates than White subjects. There was no significant difference in seroprevalence by gender.

Among subjects with depressive disorders 50 percent were HIV-infected, a significantly greater percentage than in other diagnostic groups, for example, 25 percent for subjects with schizophrenia or psychotic disorders and 21 percent for subjects with bipolar disorder. It is possible that patients with acute depression from drug use or other causes may tend to put themselves in situations with higher risk of HIV exposure.

Psychiatric disorders can present challenges for the treatment of HIV-infected people. For example, 39 percent of the study group was homeless at the time of admission. Preoccupied with obtaining drugs, and finding food and shelter, these individuals typically have difficulty caring for themselves, obtaining psychiatric or medical follow-up, and adhering to medications.

Next Month

AIDS’ Impact: The Third International Biopsychosocial Aspects of HIV Infection Conference, convened in June in Melbourne, Australia. In the October issue of *FOCUS*, David McInnes, of the University of Western Sydney, reflects on the conference and its emphasis on building partnerships to respond to the complexities of the epidemic.

Also in the October issue, Peter Aggleton, of the University of London, reviews the wide range of topics presented at the conference. He looks at inequalities in the impact of HIV on various communities and focuses on empowerment as a strategy for challenging these inequalities.

And finally, Purnima Mane, of the World Health Organization, addresses how gender roles and relations in different cultures influence both men’s and women’s vulnerability to HIV.
DID YOU KNOW?

You can access a FREE searchable archive of back issues of this publication online! Visit http://www.ucsf-ahp.org/HTML2/archivesearch.html.

You can also receive this and other AHP journals FREE, at the moment of publication, by becoming an e-subscriber. Visit http://ucsf-ahp.org/epubs_registration.php for more information and to register!

ABOUT UCSF AIDS HEALTH PROJECT PUBLICATIONS

The AIDS Health Project produces periodicals and books that blend research and practice to help front-line mental health and health care providers deliver the highest quality HIV-related counseling and mental health care. For more information about this program, visit http://ucsf-ahp.org/HTML2/services_providers_publications.html.