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## Once-daily dosing of HAART: do the benefits outweigh the concerns?

Paul Monier, MD

There is no doubt that highly active antiretroviral therapy (HAART) has favorably affected the treatment of HIV-infected patients. Patients who are able to strictly adhere to and tolerate an antiretroviral regimen clearly benefit in terms of both symptoms and disease progression.

However, this favorable response is often tempered by the complexity of the treatment schedule employed, as well as by toxicities of individual antiviral agents. These factors lead to non-adherence, the rate of which has been estimated to be as high as 50%.<sup>1</sup> Recognizing this, a major goal in the treatment of HIV infection has been simplification of the complex dosing schedules that have become commonplace

in treating this illness. Several strategies have been employed to this end, including combination medications, the development of agents with longer half-lives, and the exploitation of pharmacokinetic interactions between agents to boost drug levels and allow for reduced dosing frequency and easier dosing requirements. The latter two strategies have played a major role in the evolution of once-daily dosing of HAART, which has recently come to the forefront as another means of achieving greater adherence.

Suboptimal adherence with medications is the most common impediment to a successful outcome in treating an HIV-infected individual.<sup>2</sup> Lack of adherence not only leads to

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### Pharmacy

## Treating depression in the HIV-infected patient

Billy R. Brown, PharmD

Adherence is one of the most important factors contributing to the success of highly active antiretroviral therapy (HAART) in people living with HIV disease. It has been shown that greater than 95% adherence is needed to prevent virologic failure. Of the many barriers affecting adherence, the recognition of co-morbid mental illness

among people living with HIV continues to gain increased attention.

Diagnosing depression in HIV-infected individuals may be complicated for several reasons. First, depressive symptoms may have various etiologies, including CNS opportunistic infections, HIV dementia, medications, and psychoactive substance abuse or

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## Medicine

# Advantages are clear, but therapy not right for every patient

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inadequate viral suppression, but also places the patient at increased risk for the development of drug resistance, thus limiting future treatment options. It is generally accepted that compliance rates of >95% are required for optimal efficacy of HAART. In one study, rates of virologic failure, defined as HIV viral RNA levels of >400 copies/ml, were 30% higher in patients who were 90-95% adherent with their medications than in those who were >95% adherent.<sup>3</sup> As would be expected, the percentage of successful outcomes drops as compliance decreases. Patients cite many reasons why they are unable to adhere to their medications, including forgetfulness, inconvenient dosing schedules, heavy pill burdens, drug intolerance and adverse effects.<sup>4</sup> The higher rates of mental illness and substance abuse frequently seen in HIV-infected populations only add to the problem of noncompliance. It is hoped that once-daily dosing of HAART will positively impact adherence by directly influencing medication-related problems such as inconvenient dosing, as well as by providing treatment schedules that can conceivably be followed by typically nonadherent patients. Studies have shown that once-daily dosing in the treatment of hypertension is only somewhat better than twice-daily dosing but superior to regimens that require medication be taken

three times per day,<sup>5</sup> whereas accuracy of dose timing was much better in the once-daily group than that seen in the twice-daily group. Similar results have been shown in studies assessing compliance in patients being treated for diabetes.<sup>6</sup> Whether this can be extrapolated to the use of antiretroviral agents remains to be seen. All of this aside, HIV providers need to understand that nonadherence is a multifactorial problem and although a step in the right direction, once-daily dosing will not be a "magic bullet" that resolves all adherence issues.

The number of once daily options has recently expanded and will continue to do so. FDA-approved agents available for once daily use in treating HIV infection include efavirenz, didanosine, tenofovir and amprenavir when combined with low dose ritonavir (RTV). Agents currently FDA approved for twice daily dosing but under evaluation for once-daily use include lamivudine, nevirapine, other RTV-boosted protease inhibitors, and abacavir. Investigational agents that will be taken once daily include atazanavir, stavudine XR, and emtricitabine, as well as other agents less further along in development (Table 1). Several studies cite success using various combinations of available agents in treating HIV infection, and more data is certain to evolve. Several combinations consisting of two nucleoside reverse transcriptase inhibitors (NRTI) with either a non-nucleoside reverse

transcriptase inhibitor (NNRTI) or an RTV-boosted protease inhibitor (PI) from Table 1 could be used to construct a once-daily antiretroviral regimen. It should be noted, however, that tenofovir and didanosine should only be used together with caution, if at all, because of an interaction that leads to potentially toxic levels of didanosine. The most studied once daily combination consists of efavirenz, didanosine, and lamivudine.<sup>7,8</sup> In one cohort, 77% of 75 patients achieved an HIV viral RNA <50 copies/ml with a concomitant mean rise in CD4 cell counts of 199/ml. Similar results were reported in another trial which evaluated the same regimen in 40 additional patients. Several RTV-boosted PI-based regimens have been evaluated<sup>9-11</sup> using various combinations containing low dose ritonavir added to either amprenavir, saquinavir, indinavir, or lopinavir. In addition, a once daily triple NRTI regimen anchored by abacavir is likely to evolve as well.

The advantages of once-daily dosing of HAART are clear. Less frequent dosing should lead to improved adherence and ultimately to more successful outcomes. In addition to improved symptoms related to viral suppression, many patients would also be expected to experience a psychological boost resulting from the impact once daily dosing could have on lifestyle, as well as a general sense of well being as treatment becomes more simplified. Other advantages include, in some



cases, reduced cost and a greater ability to employ directly observed therapy (DOT), which has proven useful in certain populations such as patients who are incarcerated and those in drug rehabilitation programs.<sup>12</sup>

No new treatment strategy can be employed without concerns and once-daily HAART is certainly no exception. First of all, there is a lack of data to support its use as optimal treatment in terms of efficacy and durability of viral suppression when compared to standard dosing. Preliminary data appears favorable in this regard but is based mostly on observational cohort studies. Randomized comparative trials are needed to address this issue. Until more data are available, providers may want to be selective in choosing patients who are prescribed once-daily regimens, focusing on those with less advanced disease states or those whose lifestyles preclude more frequent dosing. Another commonly asked question concerns missed doses. If a patient taking once-daily HAART were to miss his or her scheduled medications, a 48-hour interval could elapse between doses, potentially allowing viral replication and possible resistance formation as drug levels fall below the IC<sub>50</sub> for that agent. Because of this, it is suggested that drugs that have long half-lives and are therefore “forgiving” if doses are missed should be used when constructing these types of regimens. Examples of such agents include the NNRTI’s efavirenz and nevirapine, as well as amprenavir when boosted with ritonavir. Based on some

pharmacokinetic models, missed dosing doesn’t appear to be any more of a problem with these agents when used once daily than when standard dosing is used. However, this concept of “forgiveness” is not completely understood and the clinical effects of missing doses of a once-daily regimen are not known and will be further complicated by interpatient variability, the role of intracellular concentrations of medications, and drug-drug interactions. Another concern with once-daily HAART is pill burden. This is particularly a

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**Though a step in the right direction, once-daily dosing will not solve all adherence issues.**

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problem with the PI-based regimens, which can require as many as 12 pills to be taken all at once. Whether this is an improvement over standard dosing of PIs, which usually requires 5-6 pills be taken twice daily, remains to be seen. For NNRTI-based regimens, pill burden is less of an issue, although no studies demonstrate whether 4-5 pills taken one time per day is an improvement over one pill twice daily; i.e. Trizivir.<sup>®</sup> Many clinicians have also raised the question of whether taking more pills once daily will be associated with a greater incidence of adverse effects. It seems reasonable to expect that

the PI-based regimens are likely to be associated with more gastrointestinal side effects such as nausea and vomiting. In a study comparing once-daily HAART containing ritonavir-boosted saquinavir with an efavirenz-based regimen, there was a significantly higher discontinuation rate in the saquinavir-ritonavir arm with 34% of these patients experiencing nausea, vomiting, or diarrhea.<sup>13</sup> It should be noted that these toxicities are more likely to occur using the soft gel formulation of saquinavir. This has led to a renewed interest in the use of Invirase<sup>®</sup> (the hard gel formulation of saquinavir) in lieu of Fortavase<sup>®</sup>, combined with ritonavir, a regimen that would be less likely to induce gastrointestinal-related complaints.

The evolution of once-daily dosing of HAART is another positive advance in the treatment of HIV-infected patients. Complex treatment schedules and adverse effects of medications have tempered the incredible success seen in patients who are able to adhere to and tolerate HAART. And although improvement in terms of viral suppression, immunologic response and symptoms is clearly desirable, it is often achieved at the expense of quality of life which is affected by dosing schedules, pill burdens and side effects. Once-daily dosing has the potential to positively impact quality of life. However, as with any new treatment strategy, there are real concerns and once-daily HAART should be used judiciously. One certainly does not want to sacrifice efficacy for the sake of

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convenience. In addition, whether or not more pills taken once daily will lead to better adherence than fewer pills taken twice daily is not clear. Like most decisions faced in treating HIV infection, the choice to use once-daily therapy needs to be based on individual patient characteristics and in all likelihood will be well suited for some, while less than ideal for others. ❖

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**Table 1. Once-Daily Antiretroviral Agents**

FDA-approved Agents	Agents Under Evaluation for Once-daily Dosing	Investigational Agents
Didanosine 400mg if >60kg* 250mg if <60kg*	Lamivudine 300mg	Atazanavir
Tenofovir 300mg**	Abacavir 600mg	Stavudine XR
Efavirenz 600mg	Nevirapine 400mg	Emtricitabine
Boosted amprenavir***	Boosted protease inhibitors***	Others

\*must be taken on an empty stomach  
\*\*must be taken with a meal  
\*\*\*doses of once daily RTV-boosted PIs that have been studied:  
amprenavir 1200mg + ritonavir 200mg  
indinavir 1200mg + ritonavir 200mg  
saquinavir 1600mg + ritonavir 200mg  
lopinivir 800mg + ritonavir 200mg

## Our web address has changed!

Please make a note of our new web address:

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It looks very similar to our old address, but please note that it now has two "a's" in it.

Once you go to the site, please put it in your favorites and check back often for updated materials!



## Pharmacy

# Managing depression can be key to promoting adherence

### Depression, from page 1

dependence. Accordingly, these processes should be included in the differential diagnosis of depression. Second, diagnosis is complicated due to the presence of physical or somatic symptoms common to both the medical and depressive disorders. Finally, because several diagnostic strategies are used by clinicians, there is a risk of overdiagnosing or underdiagnosing treatable depressive disorders. To reduce the risk of overdiagnosing, some clinicians apply more weight to cognitive/affective depressive symptoms, or substitute some of the symptoms for somatic/physical symptoms. Others include somatic/physical symptoms along with cognitive/affective depressive symptoms to reduce the risk of underdiagnosing.

### **Background**

Although the exact physiological basis of depression is not known, most evidence supports abnormalities in serotonin (5-HT) and/or norepinephrine (NE), two of the most prominent neurotransmitters in the central nervous system (CNS). As a result, most of the currently available antidepressants alter the activity of one or both of these neurotransmitters.

Pharmacotherapy is appropriate for the majority of patients. However,

psychotherapy is a useful choice either adjunctively or for patients with milder forms of depression. More severely depressed patients may require hospitalization and electroconvulsive therapy (ECT).

Currently, the most widely used drugs are the selective serotonin reuptake inhibitors (SSRIs) and the atypical antidepressants (which act on multiple sites within the CNS to elicit an antidepressant effect). These drugs have essentially replaced the tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs) in the treatment of depression. Table 1 on page 8 highlights the different classes of antidepressants.

### **Treatment**

In the setting of HIV disease, antidepressants should be chosen in a manner to minimize side effects, maximize efficacy and avoid deleterious drug-drug interactions. Because of the complexities involved in adhering to HAART, choosing concomitant medications that are tolerable and efficacious, especially antidepressants, is of paramount importance in achieving therapeutic and clinical goals.

### **Selective Serotonin Reuptake Inhibitors (SSRIs)**

The SSRIs are much better tolerated than the TCAs and MAOIs. They provide a wider spectrum of activity, yet are not lethal in overdose. They

produce fewer anticholinergic effects and are not associated with weight gain. With the exception of fluvoxamine, all the SSRIs approved for use in the United States have indications for the treatment of depression. Most common side effects include nausea, diarrhea, headache, sexual dysfunction, nervousness, insomnia and sedation. Nausea is usually problematic during the initial dosage titration. Supplementation with bupropion, or a reduced dosage of the SSRI often manages sexual dysfunction. Withdrawal symptoms occur after abrupt discontinuation of SSRIs, especially those with short half-lives. These symptoms include dizziness, fatigue, weakness, nausea and headache. Discontinuing treatment should involve a slow taper. Serotonin syndrome is another potential side effect that results from the effect of SSRIs on serotonin reuptake, as well as their interaction with other drugs, especially MAOIs. Confusion, agitation, myoclonus, hyperreflexia, tremor, autonomic dysfunction and potentially death characterize this syndrome. SSRIs are metabolized by cytochrome P450 (CYP 450) 1A2, 2C, 2D6 and 3A4; therefore, the potential for drug-drug interactions exists with other drugs metabolized by the cytochrome P450 system (e.g. non-nucleoside reverse

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## Pharmacy

# HAART makes choice of antidepressant more complex

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transcriptase inhibitors and protease inhibitors).

Fluoxetine is a potent inhibitor of CYP 450 2D6 and has a prolonged elimination half-life with a potent active metabolite. There have been case reports in the literature documenting drug-drug interactions between SSRIs and TCAs. Fluoxetine has been shown to increase plasma levels of non-nucleoside reverse transcriptase inhibitors (NNRTIs) and protease inhibitors (PIs), thereby increasing the potential for side effects.

Paroxetine also inhibits CYP 450 2D6. It has been shown that bleeding times have increased when administered concomitantly with warfarin.

Sertraline inhibits CYP 450 1A2, 2C19 and 2D6. It has been shown to increase plasma concentrations of warfarin, desipramine, nortriptyline and carbamazepine.

Citalopram has been found to cause the least inhibitory effects among the SSRIs, therefore causing the least potential for drug-drug interactions. Because it is metabolized by CYP 450 3A4 and 2C19, significant drug interactions cannot be ruled out. However, because of its ease in dosing, minimal side effects and drug-drug interactions, citalopram provides a great option for

depressed people living with HIV disease.

### **Atypical Antidepressants**

The atypical antidepressants (also known as second generation antidepressants or heterocyclics) have some characteristics similar to TCAs, yet retain their individuality.

Bupropion inhibits the reuptake of dopamine and NE, and is an inhibitor of CYP 450 2D6. It has a low incidence of sedation, sexual dysfunction and weight gain. However, if dosed too aggressively, it may precipitate generalized seizures. Common side effects include agitation, dry mouth, insomnia, headache, nausea, vomiting, constipation and tremor. It is contraindicated in patients with seizure disorder or bulimia. Bupropion is typically used as adjunctive therapy, or for patients exhibiting sexual dysfunction from another antidepressant. It is also used for smoking cessation treatment.

Mirtazapine is a serotonin receptor antagonist at subsites 5-HT<sub>2A</sub>, 5-HT<sub>2C</sub> and 5-HT<sub>3</sub>, as well as an alpha<sub>2</sub> noradrenergic receptor antagonist. It is a good choice to use in combination with other antidepressants because of relatively uncommon drug-drug interactions. Most common side effects include sedation, increased appetite, weight gain, dizziness, drowsiness and constipation. It has no known significant effect on CYP 450 enzymes.

Nefazodone blocks 5-HT<sub>2</sub> receptors and inhibits 5-HT reuptake. It has a low incidence of sexual dysfunction and improves depression-related anxiety symptoms. Most common side effects include headache, fatigue, orthostatic hypotension, sedation, dry mouth and constipation. Nefazodone is a potent inhibitor of CYP 450 3A4, therefore posing potential drug-drug interactions, especially with NNRTIs and PIs.

Trazodone inhibits reuptake of 5-HT and NE. It is generally used to manage insomnia, especially insomnia associated with SSRI use. Most common side effects include drowsiness, dizziness, headache, nausea and orthostatic hypotension. Priapism is a rare occurrence, but is very serious. Trazodone is metabolized extensively by the liver, with some involvement of CYP 450 2D6.

Venlafaxine inhibits the reuptake of 5-HT and NE. At lower doses, it has a more prominent effect on 5-HT. As the dose increases, so does the effect on NE. Most common side effects include asthenia, sweating, nausea, vomiting, constipation, anorexia, dry mouth, dizziness, nervousness, anxiety, blurred vision, and abnormal ejaculation/orgasm. Though rare, it may also cause increased blood pressure; therefore regular monitoring is warranted. Venlafaxine is metabolized largely by CYP 450 2D6, and to a lesser extent by



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4th International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV  
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▲ December 1-3, 2002  
Second International Conference on Substance Abuse and HIV  
Mumbai, India  
E-mail: yusufmerchant@sanskritiindia.com

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HIV DART 2002: Frontiers in Drug Development for Antiretroviral Therapies West Indies  
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3A4. The risk for drug-drug interactions exist, yet does not appear to be clinically significant.

### Tricyclic Antidepressants (TCAs)

TCAs are believed to work by blocking the reuptake of 5-HT and NE. These neurotransmitters are released in response to the arrival of an action potential in various areas of the brain, thereby prolonging the actions of the neurotransmitters. Common side effects are associated with anticholinergic effects and include dry mouth and eyes, urinary hesitancy/retention and constipation. The drugs in this class can cause increases in heart rate at usual daily doses, as well as arrhythmias and death in overdose. TCAs are contraindicated in patients with cardiac conduction disorders and in patients with narrow-angle glaucoma and prostatic hypertrophy. The drugs in this class are metabolized by CYP 450 1A2, 2C, 3A4 and 2D6.

### Monoamine oxidase inhibitors (MAOIs)

MAOIs exert their action by preventing the catabolism of NE, epinephrine, dopamine and 5-HT, thereby enhancing their effects. They are primarily used in treatment-resistant patients. Because these drugs (namely, phenelzine and isocarboxazid) irreversibly block monoamine oxidase, there is significant accumulation of tyramine and loss of metabolism that protects against tyramine in foods.

Consequently, these drugs have the potential of producing a hypertensive crisis if taken with certain foods or supplements containing excessive amounts of tyramine.

The recognition and proper management of co-morbid mental illness among people living with HIV are important factors in promoting adherence to HAART. Choosing the most appropriate antidepressant should be approached by considering drugs with minimal side effects, maximal efficacy and minimal drug-drug interactions. As drugs of choice, the SSRIs and atypical antidepressants offer effective and tolerable options for treating depression in the setting of HIV disease. ♦

### See Table 1 next page

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**Table 1. Pharmacologic Parameters of Antidepressants**

Drug	Usual Dosage (mg/d)	Reuptake Inhibition		Adverse Effects						
		N	S	ACH	Drowsiness	Orthostatic Hypotension	Cardiac Arrhythmias	GI Distress	Weight Gain	Sexual Dysfunction
<b>Tricyclics</b>										
Amitriptyline (Elavil®)	100-300	3	4	5	5	5	4	1	5	4
Desipramine (Norpramin®)	100-300	4	2	3	3	3	3	1	2	4
Doxepin (Sinequan®)	100-300	2	3	5	5	5	3	1	5	4
Imipramine (Tofranil®)	100-300	3	3	5	4	5	4	1	5	4
Nortriptyline (Pamelor®)	50-150	3	2	3	3	3	3	1	2	4
Protriptyline (Vivactil®)	15-60	3	2	5	1	3	4	1	1	4
Trimipramine (Surmontil®)	100-300	2	2	4	4	4	4	1	5	4
<b>Monoamine Oxidase Inhibitors</b>										
Isocarboxazid (Marplan®)	20-60	-	-	3	2	5	2	1	-	4
Phenelzine (Nardil®)	45-90	-	-	3	3	5	2	1	4	4
Tranylcypromine (Parnate®)	20-50	-	-	3	0	5	2	1	3	4
<b>Selective Serotonin Reuptake Inhibitors</b>										
Citalopram (Celexa®)	20-60	2	4	0	2	0	0	4	0	5
Fluoxetine (Prozac®)	10-80	1	4	0	0	0	0	4	0	5
Paroxetine (Paxil®)	20-60	1	5	2	2	0	0	4	2	5
Sertraline (Zoloft®)	50-200	1	5	0	1	0	0	5	0	5
<b>Atypicals</b>										
Amoxapine (Asendin®)	200-600	3	2	2	2	2	3	1	3	4
Bupropion (Wellbutrin®) (WellbutrinSR®)	150-450 150-400	1	1	0	0	0	2	3	0	0
Maprotiline (Ludomil®)	150-225	3	2	3	3	3	3	1	3	3
Mirtazapine (Remeron®)	15-45	4	4	0	4	0	-	1	3	0
Nefazodone (Serzone®)	300-600	1	4	0	4	2	2	3	3	0
Trazodone (Desyrel®)	200-600	1	3	1	5	5	2	3	3	0
Venlafaxine (Effexor®, Effexor XR®)	75-375	5	5	1	2	1	2	5	0	4

5 –very high; 4 –high; 3 –moderate; 2 –low; 1 –very low; 0 –none; - unknown



## Dentistry

# Court decisions have implications for practice of dentistry

*Kishore Shetty, DDS, MS, DDPH*

In March 2002, the U. S. Supreme Court was asked to review the case of an HIV-infected dental hygienist who was barred from treating dental patients because of his disease. Prior to this case, the only other time the high court had intervened in a case concerning HIV and dentistry was back in 1998.

The case began in 1994 when Sidney Abbott, who was HIV positive but had no visible symptoms, arrived for a dental appointment at Dr. Randon Bragdon's office in Bangor, Maine. Although Bragdon routinely fills cavities in his office, he was unwilling to do so for Abbott because of her HIV status. Rather, Bragdon insisted that she be treated at a distant hospital where he did not have hospital privileges and pay the increased costs.

The case went all the way to the Supreme Court, which ruled in June 1998 that an asymptomatic HIV-infected patient is protected against discrimination under the Americans with Disabilities Act (ADA). In a 5-4 decision, the court also ruled that since HIV limits major life activities it qualified as a disability under the ADA, regardless whether or not symptoms are evident. The Supreme Court ordered the First Circuit Court to further review the question of whether Ms. Abbott posed "a direct threat to the health or safety of others"

and, as such, whether Dr. Bragdon's actions were appropriate. Importantly, the court rejected Bragdon's argument that the judgment of risk should be left to the individual medical practitioner. Justice Kennedy wrote that Bragdon's personal views should receive "no special deference simply because he is a health care professional."

### **Waddell vs Valley George Dental Associates**

Spencer Waddell, 37, was employed by Valley George

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**Dental professionals  
wait to see if  
Supreme Court will  
clear up the present  
contradiction.**

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Dental Associates, Atlanta, in the mid-1990s, as a dental hygienist whose primary responsibility was performing routine prophylaxis—cleaning of patients' teeth. In September 1997, Waddell tested positive for the human immunodeficiency virus. The administering physician notified the dental practice of Waddell's test results. His employers put Mr. Waddell on leave with pay while they decided what to do. Ultimately, Valley George informed Waddell that he could no longer treat

patients because he was HIV-positive. Instead, the company offered him a clerical job at about half his salary. Waddell turned down that offer, prompting Valley George to fire him.

Mr. Waddell appealed to the Northern Georgia District Court, claiming protection under the Disabilities Act, the Rehabilitation Act and state statutes. Waddell's attorneys noted that there are no reports of HIV transmission from a dental hygienist to a patient. However, the court upheld Mr. Waddell's suspension from patient contact and declared that the dental hygienist's asymptomatic HIV infection posed a "direct threat" to patients. Mr. Waddell's attorneys appealed the ruling to the 11<sup>th</sup> US Circuit Court of Appeals (covering Alabama, Florida, and Georgia).

In a ruling last December, a unanimous three judge panel concluded that "the district court properly granted summary judgment to Valley Forge Dental Associates (his employers) because an HIV-infected dental hygienist like Waddell poses a significant risk of HIV transmission to his patients." Judge Stanley Birch noted that none of Waddell's medical experts disputed that transmission "theoretically could happen, even though the risk is small and such an event never before has occurred." Birch wrote, "Waddell, because he is

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infected with the fatal, contagious disease of HIV, is a direct threat to his work place.”

This decision has wide implications and affects dentists, dental hygienists and other health care professionals. Did the court of appeals err when it allowed a “direct threat” defense to prevail, despite evidence that the risk of HIV transmission from a dental hygienist to a patient is “immeasurably low and purely theoretical”? If, as the CDC contends, the use of universal precautions (barrier techniques, gloves, masks, sterilization, etc.) essentially eliminates a direct threat of hazard to a health care provider, it seems logical to assume it would do at least the same for the patient. The 11<sup>th</sup> Circuit Court’s ruling in the Waddell case contradicts court findings from *Bragdon vs. Abbot*. In that case, the courts arguably applied a narrower view of “direct threat” when requiring a dentist to provide care to an HIV-positive patient. As in Waddell, the patient in *Bragdon* did not deny there was a theoretical possibility of HIV transmission, yet the *Bragdon* court determined that there was no “direct threat” given that the dentist’s concern was “too speculative or too tangential.” Unless and until the law becomes more consistent, the location where an infected provider practices (or, for that matter, where an infected patient seeks treatment) may affect the outcome in such cases.

Dentists who employ HIV-positive hygienists and assistants also may be guided by the case. Since the employment provisions of the AwDA apply directly only to employers with 15 or more employees, most dentists will need to turn to their state and local laws for answers. Dentists who are themselves HIV-infected, or who have other infectious diseases such as Hepatitis B or C, may be affected, particularly if they work for large employers, or must submit to state panels regarding their ability to practice safely or both. Without a clear ruling from the justices, confusion surrounding the disabilities act will persist, and that in turn will contribute to unwarranted public concerns about the safety of receiving health care in the dental office. And only the Supreme Court can clear the muddy waters of confusion.

It remains to be seen if and when the Supreme Court will review the case. Health professionals will closely watch the process with the knowledge that any decision the high court renders will greatly impact the provision of dental care. ❖

NOTE: This article is informational only and does not constitute legal advice. It is based on Sfikas PM., HIV and discrimination. *JADA*, Vol. 133, March 2002.

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## Mental Health

# Should HIV-infected parents tell their children? If so, how?

Jill Hayes Hammer, PhD

Some of you reading this article may remember as a child having had your ears covered by your mother's hands when she whispered, "Aunt Marge has cancer." Cancer, like other serious illnesses, was not talked about openly, especially with children. Many of you also will remember that as a child you knew what cancer was, that "Aunt Marge" had cancer, and that it annoyed you that your parents and other adults would not talk with you about it.

Talking with children about illnesses and diseases, including HIV/AIDS is not easy, but it can be helpful in the emotional growth of children. Talking can also reduce their anxiety. Security and trust are major developmental issues during childhood, and the illness of a parent can disrupt this sense of security and affect the child's ability to cope with daily frustrations. Researchers suggest that sharing information about HIV/AIDS with a child allows the child to express his/her feelings about the illness, shows that the parent trusts the child enough to speak with him/her about it, and provides an opportunity for preparing for the sadness and loss that results from serious illness (Armistead, L., Tannenbaum, L., Forehand, R., Morse, E., & Morse, P., 2001; Rosenheim & Reicher, 1985). In many cases, children already know something is wrong (i.e., four bottles of pills on the dresser, multiple doctor visits, etc.) and may be reluctant to speak with their parent about it.

While disclosure can be positive, many parents may believe the costs of telling their children outweigh the benefits. Parents report being worried about driving their child away, causing the child to worry about their illness, and the shame and stigma the child may endure as a result of others knowing his/her parent's health status (Armistead, et al., 2001; Faithful, 1997). Armistead and colleagues (2001) reported that less than one-third of mothers disclosed their HIV-status to their children.

If parents want to disclose their HIV-status to their children, we as health care providers need to be able to guide and assist patients in informing their children and in handling what comes next. If mothers do decide to disclose their HIV-

status, they generally tell their children immediately after receiving the diagnosis, a time when the mother also needs reassurance, education, and possible counseling. Therefore, the mother has a double whammy—learning that she is HIV+ and worrying about whether to tell her child and what her child's reaction to disclosure would be.

Researchers have indicated that almost half of children initially reacted positively to disclosure, but about 40% reacted negatively, being angry or disappointed with the parent (Armistead, et al., 2001). The researchers highlighted that this was an initial reaction, one that likely would change over time.

Children and adults alike have misperceptions about HIV/AIDS. Children may feel that their parent may die, that they cannot hug or kiss their parent, or that they may get AIDS as a result of contact with their parent. Armistead and colleagues (1999) interviewed 213 six- to eleven-year-old children of parents with and without HIV in New Orleans, Louisiana, and asked about their understanding of HIV. Many of these children inaccurately believed that "nasty, stupid, slimy, black, gay, poor, crazy people" are infected with HIV. Children's reports of "how do you get AIDS," was through "touching or kissing someone, cooking, from the air, putting on other people's lipstick, or picking up dogs" (Armistead, et al., 1999, p. 287).

A second concern is the issue of stigma and shame. How will the child handle disclosing his/her parent's HIV status to friends? In collaborating with our patients about how to tell their children that they are HIV+, we should suggest that parents be clear, honest, and simple (Adams-Greenly & Moynihan, R., 1983). Consideration should be given to the child's developmental and cognitive levels. For example, you would tell an 8-year-old something completely different than a 15-year-old.

Guide your patients away from saying something like "Mommy has AIDS and it could kill me." Rather, steer them in the direction of "Mommy has a bad sickness called HIV/AIDS. I'm working with the doctors on making sure that I can be with you as long as possible."

Let the child know that it is ok to ask you questions and talk about it.

Take cues from the child; if the child wants to talk, great. If not, do not force the issue. The child likely will return later with questions or comments after having time to process what he/she has been told.

After disclosing to the child, the parent needs to provide predictable daily routines, reassurance that the child will not be abandoned and attention to his/her needs. Spending time with the child and allowing the child to express his/her feelings can also alleviate possible fears or anxiety, especially in young children.

Validate what the child is experiencing. For example, say "It's okay for people to feel sad or mad when someone they love is sick."

Books may also be helpful tools for parents. *Anisha's Story* published by Agouron Pharmaceuticals is a good picture book for children that tackles issues surrounding HIV/AIDS. Clinicians and patients can obtain copies of the book by calling 1-888-847-2237.

Whether the patient decides to disclose to his/her children or not, health care providers need to be available to assist the patient in weighing the potential benefits and pitfalls of disclosure. Consultation with or referral to a health educator or a mental health professional may be helpful in some cases, such as when an individual has no other family nearby or when the individual is experiencing significant distress above what would be expected for the situation. ♦

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▲ Ethical Considerations of Assisted Reproductive Technologies [Ethics Committee of the American Society for Reproductive Medicine; <http://www.asrm.org/Media/Ethics/ethics94.html> accessed 04/01/2000]

▲ International HIV/AIDS [AIDS Reference Guide, March 2002]

▲ Drug Firms' Representatives Express Concern Over WHO's AIDS Drug List [Clare Kapp. *Lancet* 2002;359:1134]

▲ South African Court Again Tells Government to Increase Access to AIDS Drug [A Baleta. *Lancet* 2002;359:1132]

▲ WHO Provides AIDS Drug List [Clare Kapp. *Lancet* 2002;359:1134]

▲ South African Government Loses Again on Perinatal Issue [A Baleta. *Lancet* 2002;359:1132]

▲ Myelomeningocele Following Pregnancy Exposure to Efavirenz [Fundaro C et al. *AIDS* 2002;16:299]

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