Introduction

Adolescence is considered a healthy time of life with little need for medical intervention. Although there is partial truth to this belief, some adolescents may suffer from a wide variety of illnesses and injuries (Council on Scientific Affairs, 1990; Feinstein et al., 1998; Hein et al., 1980) with immediate and, in many cases, lifetime effects. Many teenagers arriving in detention have unmet medical needs caused by barriers to access (Council on Scientific Affairs, 1990; Joseph-Di Caprio, 2002), including little or no health insurance, lack of parental involvement (Hein et al., 1980), chaotic lives, and misunderstanding of medical care needs by the youth or his/her parents. Incarceration provides an opportunity to meet the medical needs of a particularly vulnerable population (American Academy of Pediatrics, 2001; Hein et al., 1980; Society for Adolescent Medicine, 2000). In addition, because the act of detaining citizens removes their ability to seek care voluntarily, the legal and moral obligation passes to the detaining authority to provide care that meets community standards (Costello & Jameson, 1987). Early identification and treatment provides a cost-effective intervention by preventing more serious complications requiring greater future expenditures. Additionally, rehabilitation of delinquent youths proceeds more smoothly when they are free of disease, pain, and disability.

This overview discusses health and health care issues that affect delinquent youths and that should be considered when a juvenile becomes involved in the juvenile justice system.

Abstract

Adolescents arriving in detention often bring with them significant medical, dental, and psychological problems. These issues have important implications for courts that must decide the best disposition for offending youths. Appropriate treatment benefits the individual by enhancing his/her well-being and improving his/her chances of successful rehabilitation. Society also benefits by avoiding the higher cost of caring for neglected conditions later in life. A comprehensive health care program for detention facilities involves establishing standardized procedures that address both common adolescent problems plus those more peculiar to detainees. Health care professionals working in a correctional setting have unique duties such as clearing youths for boot camp, monitoring injuries, dealing with resistant patients, monitoring for safe activities, and planning aftercare for youths who may face impediments to accessing care such as poor motivation and poverty. Research concerning issues specific to the needs of incarcerated youths remains infrequent and should be undertaken by health care providers. This article provides an overview of medical issues confronting juvenile offenders that should be considered when a juvenile becomes involved in the juvenile justice system.

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Health and injury likely to result from delinquent behavior; health concerns for all adolescents; special issues relevant to corrections; and administrative concerns. The medical issues presented apply to both short-term detainees (pre-adjudication) and longer term incarcerated adolescents (post-adjudication). Those subject to shorter detention obviously have more urgency in dealing with health concerns. Youths who are detained pending trial should have their health addressed, but in some jurisdictions this is not the case. Because of this, plus problems with sharing medical records, there is uncertainty about previous care, and long-term detention facilities will have to initiate health screening.

Health Upon Entering Detention

The types of health problems experienced by incarcerated teens have varied during the past three decades, but all studies revealed high rates of disease. Litt and Cohen (1974) and Hein and colleagues (1980) reported a rate of health conditions in newly detained adolescents approaching 50%. Almost 25 years later, Feinstein et al. (1998), using more stringent criteria but not including sexually transmissible infections (STIs), found 23% of juveniles in Alabama had serious health concerns. Feinstein et al. also found that only one-third of detainees had a regular source of medical care, one-fifth had a private physician, and half were from families unable to ensure follow-up of medical care needs. Occasionally, detained juveniles arrive with communicable infections, including tuberculosis. Sports and orthopedic injuries, gunshot wounds, bone fractures, and previous or recent concussions are common. STIs affect nearly half of all girls and 25% of boys (Morris, Baker, Valentine, & Pennisi, 1998). Ten percent of the admitted girls are pregnant, and 40% have been pregnant at some time (Morris et al., 1998). Forrest and colleagues (2002) also reported poorer overall health status of incarcerated youths compared to adolescent males in the community.

Despite these high rates, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) reported in 1994 that only 68% of detained juveniles were tested for tuberculosis and only 53% were tested for STIs in the institutions the agency surveyed (Parent et al., 1994). Since the 1960s and 1970s, a number of professional organizations have worked to improve medical care within juvenile facilities (American Academy of Pediatrics, 2001; Society for Adolescent Medicine, 2000).

The national epidemic of obesity affecting our youths (Lissau et al., 2004) is now the focus of efforts to prevent excess weight and reduce obesity in our young people (U.S. Department of Health and Human Services, 2001). This crisis affects all youths including those incarcerated and suggests that the medical departments and administrators of correctional facilities work together to ensure a healthy diet and adequate exercise (Morbidity and Mortality Weekly Report [MMWR], 2003). The judicial system may need to become involved in attempts to change food service or exercise levels in correctional facilities.

A number of health-compromising factors, such as morbidity from insults during pregnancy and delivery (Kandel & Mednick, 1991), including low birth weight (Hack et al., 2002) and in some cases exposure to drugs and alcohol (Fast, Conry, & Looch, 1999), appear to be associated with an increased risk of delinquent behavior. Youths arrive in detention with significant health care needs that should be addressed to prevent further complications.

Medical Care Requirements for Incarcerated Youths

Models of care for incarcerated juveniles vary according to the size and location of the institution, as well as the duration of stay. Regardless of the model, an initial screening evaluation done by trained correctional personnel (ideally, a health professional) determines whether the youth is medically and psychologically safe to be placed in the institution. More specifically, the presence of serious injury, drug or alcohol intoxication, psychiatric disease, including suicidal thoughts, and communicable infections should be ruled out. A mechanism to deal with significant positive findings should be available as a standard procedure.

Dental care, including an initial exam, cleaning, and education, plays an important role in maintaining health. Appropriate restorative treatments should be available, not just tooth extractions. Large facilities may find the services of an oral surgeon to be cost-effective because of the high rates of impacted wisdom teeth and fractured jaws secondary to fighting (Studen-Pavlovich, Ranalli, & Dick, 2002; Woolf & Funk, 1985).

Regularly scheduled and frequent sick call clinics should occur with youths seen in a location that can
provide confidentiality. Custody staff should not decide which youths are seen and which are not. There should be adequate custody staff to bring youths to care. The clinic room must be private and sufficient time allotted for the health care practitioner to address the juvenile’s problems and concerns adequately. Nurses using nursing protocols or individualized pre-authorized orders utilizing over-the-counter medication can provide much of the routine treatment. If prompt referral to a higher level provider for more complex illnesses is not possible on site, the youth should be transferred to a local health care organization. Administrative needs should not impede delivery of health care, nor should sick call be held at times of the day that would tend to reduce utilization, i.e., at night, very early in the morning, or during recreation or free time. The structure of care provision and best location to provide medical care should always be determined by medical staff in consultation with the administrator.

A comprehensive mental health evaluation should follow up the health screening examination completed just after arrival at an institution. Youths found to have significant mental health problems will have a lower risk of re-offending if suitable intervention is provided during incarceration (Thompson & Farrow, 1994). A carefully designed health care system that meets the needs of youths is appropriate in all correctional facilities.

Health Problems Resulting From Delinquent Behavior

Violence surrounds many delinquents and causes injury (Conseur, Rivara, & Emanuel, 1997). Teens entering detention may be transferred directly from the hospital to the institution and require relatively sophisticated care. Automobile accidents, falls, blunt trauma caused by objects during fights, knife wounds, and gunshot wounds inflict acute trauma and, in many cases, permanent injury. Retained bullets, especially in joints, healing bone or lung tissue, can cause lead poisoning (Correctional Health Care & Management, 1994; Huscroft, Morris, Baker, & Evans, 1994; Linden, Manton, Stewart, Thal, & Feit, 1982; Selbst, Henretig, Fee, Levy, & Kitts, 1986). Brain injury (Hux, Bond, Skinner, Belau, & Sanger, 1998), bowel injury and later obstruction, as well as leg paralysis, and paralysis of both upper and lower extremities are a few of the serious long-term problems associated with violence. The buildings, sidewalks, and ramps must be able to accommodate handicapped patients and their equipment, such as wheelchairs. Medical expertise to handle complicated post-traumatic injuries must also be reasonably available.

Many orthopedic and sports-type injuries happen to delinquent youths both before and during incarceration (Woolf & Funk, 1985). Wrist and hand fractures take place during punching, which can also cause lacerations of knuckles by an opponent’s teeth, leading to serious infections of bone, joint, and tendons of the hand. Skier’s thumb, a torn thumb ligament, results from a blow to the thumb. Knee and ankle sprains during contact sports cause torn ligaments.

Many delinquents engage in multiple risk behaviors (Canterbury et al., 1995; Canterbury, Clavet, McGarvey, & Koopman, 1998; Kim, McFarland, Kellogg, & Katz, 1998; Morris et al., 1995; Morris et al., 1998), that often result in sexually transmissible infections (STIs) (Alexander-Rodriguez & Vermund, 1987; Bell, Farrow, Stamm, Critchlow, & Holmes, 1985; MMWR, 1999; Oh et al., 1994; Shafer et al., 1993), pregnancy (Breuner & Farrow, 1995; Mason, Zimmerman, & Evans, 1998; Morris et al., 1995; Nesmith, Klerman, Oh, & Feinstein, 1997), illicit drug use (Crowe, 1998; Morris et al., 1995; National Institute of Justice, 1996), and combinations of risks (Devieux et al., 2002; Fergusson & Lynskey, 1996). For example, in Los Angeles in the early 1990s, STI rates were 38%-55% per year for delinquent girls and 18%-25% for delinquent boys; additionally, 10% of girls were pregnant on admission and 40% had been pregnant at least once (Morris et al., 1998).

Some youths will be intoxicated by street drugs upon admission and should be sent to an emergency department for evaluation and treatment of any emergency conditions. Occasionally, youths may require support with non-narcotic medications during drug withdrawal, especially from opiates such as heroin (Schwartz, 1998; Seymour & Smith, 1987).

The risk of HIV infection remains a concern, although in most cities relatively few teenagers are infected (MMWR, 1998; U.S. Department of Health and Human Services, 2000) with the possible exception of New York and New Jersey. Certain populations, including men who have sex with men (Alexander-Rodriguez & Vermund, 1987; Bell et al., 1985; MMWR, 1999; Oh et
al., 1994), people who inject drugs illegally, and women—especially women whose sex partners inject drugs—remain at higher risk (Breuner & Farrow, 1995). In Los Angeles through 1990, the rate of positive serologic tests for HIV in detained juveniles ranged from 1% to 3% annually (Morris et al., 1998). Delinquent youths have special needs due to risk-taking behavior over and above those of non-delinquent youths. Although in most areas of the country the rates of human immunodeficiency virus (HIV) infection remain low for teenagers, voluntary testing should be offered to incoming youths. A positive test allows counseling and treatment to begin in a controlled environment.

General Adolescent Medical Problems and Responses by Medical Staff When Youths Are Incarcerated

Initial screening upon arrival at the facility should include questions and simple tests to rule out infectious diseases such as tuberculosis (TB) (Rosenberg & Biggar, 1998) and other contagious infections such as chicken pox, skin infections, or hepatitis. A tuberculosis skin test (PPD) should be placed on all children who reside in high-risk communities or who may have been exposed to travelers from endemic areas. Living in cities with large immigrant populations places youths at risk for TB (Pickering, 2000). It should be noted that the previous administration of BCG (bacilli Calmette Guérin vaccine) does not result in a positive test as defined as 10 millimeters of swelling (Pickering, 2003). Youths with positive tests indicating exposure to TB should have a chest x-ray. If the x-ray shows active TB, the bacteria are collected and grown in the laboratory and the patient begun on multi-drug therapy after consultation with the local public health department. Patients with active TB should be isolated until they are no longer infectious. Most patients with a positive PPD will not have active TB and are candidates for prophylactic isoniazid treatment.

Gonorrhea and chlamydia genital infections are the most common serious infections affecting adolescents. The best diagnostic method uses the new nucleic acid amplification test of urine for both males and females (Risser, Risser, Gefter, Brandstetter, & Cromwell, 2001; Centers for Disease Control, 2002). Most cases of gonorrhea and chlamydia (66%-90%) have no symptoms. It is important to identify these infections because when left untreated, they result in serious spread of infection into the uteruses of girls that can result in lifetime complications, including tubal pregnancies and infertility. Recently, the long-term burden of asymptomatic uterine infection caused by undiagnosed chlamydia infection has increased interest in case finding. The timely treatment of identified asymptomatic infections reduces the long-term costs associated with complications by a factor of 12.

A complete discussion of STIs is beyond the scope of this article, but secondary syphilis can cause a rash that resembles many other rashes and therefore can be misdiagnosed. The number of syphilis cases is increasing in the United States but remains very low (MMWR, 2002).

On admission, all girls who have begun to menstruate need a urine pregnancy test without regard to their stated sexual history. In many states, pregnant adolescent females have the right to consent to prenatal care and pregnancy termination. Pregnant females require appropriate prenatal care, vitamins, diet including snacks, and limited activity as the pregnancy progresses. Humane preparations for their babies' care must be planned if the young mother is to remain incarcerated. Facilities that allow mothers visitation with their infants improves bonding between infants and their mothers while reducing later child abuse and neglect, as well as developmental and behavioral problems in the infant (Brooks & Bahna, 1994; Moses, 1995; Williams, 1996).

Reproductive problems must be considered for all recently admitted females with lower abdominal pain. Recurrent or chronic pelvic pain beyond that of mild menstrual cramps requires evaluation by a specialist familiar with adolescent reproductive problems. Menstrual cramps can be quite debilitating. If cramping does not respond to medications such as ibuprofen started at the very beginning of the menstrual period, the clinician should consider prescribing oral contraceptives or injectable contraceptives, which markedly reduce the pain. Pelvic inflammatory disease (PID) must be recognized and treated promptly or sterility may result.

Detained teens often suffer headaches caused by jaw joint pain, impacted wisdom teeth, sinus infection, nasal allergies, remote or recent head injury, and migraine processes (Mitchell, Bharadia, & Neinstein, 2002). The need for glasses because of nearsightedness often begins during puberty (Milder & Rubin, 1978; Rubin & Milder, 1976; Super, 1996).
Likewise, chest pain secondary to a minor arthritis-like condition affecting rib and breast bone joints and chest-wall trauma brings concerned adolescents to seek care. When these pains trigger a rapid breathing spell with lightheadedness, tingling extremities, and sometimes loss of consciousness or seizure-like behavior, both the child and staff may become frightened. These events, called hyperventilation spells, cause no bodily damage and tend to abate by age 20. Cardiac disease very rarely causes chest pain in teenagers who have no prior history of congenital heart disease. Occasionally, excess thyroid activity may cause rapid or irregular heartbeats. Individuals who pass out or have severe chest pain during exercise should have a careful cardiac examination and electrocardiogram. Exercise-induced asthma may also cause shortness of breath or chest pain during running or vigorous exercise and may be incompatible with a boot camp experience because its management can be complex and difficult to accomplish in a boot camp situation (Nelson & Risser, 1998).

Abdominal pain has many causes. Peptic ulcers (caused by a bacterial infection) may be more common in crowded living circumstances (Blecker, Lanciers, & Vandenplas, 1994; Drumm, Perez-Perez, Blaser, & Sherman, 1990; Parsonnet, Shmuely, & Haggerty, 1999; Tompkins & Falkow, 1995), thus disproportionately affecting lower socioeconomic groups. A positive blood test points to this diagnosis, although special testing is desirable to be certain of the diagnosis.

Diagnosis of hepatitis in children and adolescents may be obscured because it does not always result in jaundice (yellow eyes and skin). Four drugs (acetaminophen, isoniazid, isotretinoin-Accutane used for acne, and antifungal azoles) commonly used in adolescents, especially if used together, have caused drug-induced hepatitis and, on occasion, fulminant liver failure and death (Pickering, 2003). Constipation may appear in teens whose natural schedule is disrupted by the regimentation of life in custody. Appendicitis is the most common surgical emergency in teen years and will be diagnosed fairly frequently in larger juvenile institutions (Schwartz & Ramachandran, 1995).

Genito-urinary conditions may cause abdominal pain. Painful urination in boys may be caused by STIs, narrowing of the urine tube caused by skateboard injuries, a narrowing of opening at the tip of the penis, or genital warts. Occasionally, urinary tract infections will occur in boys but almost always when there is a previous abnormality. Testicular pain most often results from an STI, and more rarely, from a torsion (twisting) of the testis. A twisted testis must be corrected within six hours to avoid death of the testis.

A variety of benign and malignant (cancer) tumors occur during adolescence (Rohn, 1998; Weinblatt, 1998b). Benign lumps can develop at the ends of long bones, especially in the leg. These hard swellings cause pain only if they impinge on other structures. Some bone tumors cause pain, especially at night. This can be a sign of malignancy although some benign tumors respond dramatically to ibuprofen. Pain just below the knee after exercise may be due to inflammation of the tendon attachment, which is related to rapid growth. This malady causes no long-term problems and resolves with the end of active growing, usually by the age of 15 or 16. Leukemia is the most common malignant disease diagnosed during adolescence (Weinblatt, 1998a) and may cause confusing symptoms, such as fatigue and “failure to follow the program,” leading to disciplinary action.

All organs can become diseased during adolescence. Renal failure, high blood pressure, and rheumatoid problems occur occasionally. Deafness and decreased vision are insidious and have been misinterpreted as failure to follow directions or malingering (Morris & Baker, 1992). Common skin problems in teens include acne with its scarring and/or painful lesions, athlete’s foot; skin infections, dry allergic skin, and moles, including a genetic tendency on some families to develop skin cancer during teen years (du Vivier, 1986).

This review of some common adolescent health problems makes evident the wide range of medical concerns that can affect teens and reinforces the need for good medical care. By dedicating correctional resources for medical screening and treatment of youths, potentially serious conditions can be avoided and delinquency rehabilitation enhanced. Judicial officers play a vital role in helping assure care for youths by focusing the attention of correctional administrators on health care needs of individual offenders through court orders and reports back to the court. When confronted with a severely ill offender, the court may wish to contact the youth’s current providers and those in
the proposed detention institution to facilitate coordinated care. In rare instances, incarceration could be life threatening as in cases of pending heart transplant or a brain tumor. At the time of release, the court can address aftercare needs with the supervising probation/parole officer by documenting the needed care and requesting follow-up information. In critical cases, a court order mandating care may help secure funding and venues for care.

**Special Issues**

**Health Maintenance**

A complete physical examination and provision of recommended immunizations for adolescents as well as health counseling should be provided for each adolescent soon after entry into the facility, ideally within four to five days. With the emergence of meningococcal meningitis as a threat to college students (Harrison, Dwyer, Maples, & Billmann, 1998), consideration is being given to adding meningococcal immunizations to those already provided to incarcerated youth (Rosenstein et al., 1998; Tappero et al., 1996). If an institution has an outbreak of meningococcal infections, the youths and adult staff may benefit from prophylactic antibiotic treatment and consideration of immunization against meningococcus. Chronically ill youths should receive influenza (flu) vaccine each year in the early fall. Institutions with close living conditions may wish to immunize all youths against influenza. Vaccines for Children Programs in each state are likely to provide most or all these vaccines at no charge. Provision of appropriate health maintenance services to all detained youths helps protect society from infectious diseases and reduces long-term health expenditures.

**Continuity of Care for Juveniles Leaving Correctional Facilities**

The duration of stay for many adolescents may be inadequate to remedy all their physical and mental health problems. Arranging for continuity of care after release presents a particularly difficult challenge to providers inside and outside of correctional facilities. Pilot programs providing public health nurses or health educators who follow children into the community have successfully intervened for specific purposes such as delivering medication to treat STIs or ensuring a follow-up visit to a public health clinic. However, it is the author’s experience that many juveniles released with a chronic medical problem return to detention with the same unaddressed problem. Several programs in adult institutions address this problem (National Commission on Correctional Health Care, 2002).

Despite the difficulties, especially in large cities, innovative programs can be devised and piloted. Medical care could be integrated into any of the currently successful home/community-based delinquency rehabilitation programs. Despite the difficulties of providing continuity of care, continuity should remain a primary focus of the medical department of each facility and relevant community health care providers.

**Boot Camp**

Boot camp participation requires excellent physical and mental health; therefore, many youngsters when carefully evaluated will be medically excluded from boot camp. Pre-existing chronic conditions such as persistent asthma, seizures, and diabetes usually preclude attending boot camp. Youths with these and other serious health problems should be considered for alternatives to boot camp.

**Malingering**

 Teens in correctional institutions are a natural target for staffs’ beliefs that complex or confusing medical presentations must be secondary to malingering. In reality, detained teens very rarely mangle although when they do, the reason for the fabrication is usually important and the clinician should seek out the reason (Morris, 1995). When the clinician is unable to make a diagnosis, consultation should be sought. In rare instances when the patient’s symptoms are fabricated, the clinician will be rewarded by looking into the circumstances leading to the fabrication (Morris, 1995). Fear of other inmates or of a correctional officer is often at the root of the problem. In these circumstances, the medical staff should intervene on the adolescent’s behalf. Malingering or the appearance of malingering indicates a problem for the youth that should be identified.

**Consent for Care and Confidentiality Issues**

Consent issues for medical care within institutions can impede appropriate care. Incarcerated youths
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deserve the same protections and privacy regarding their records as all other citizens. Obtaining consent from parents of children detained in large urban institutions is often impossible because they cannot be found, are not focused on their child’s needs, or distrust authority. State laws that allow “mature” minors, judges, probation workers, or other officials to give consent for routine medical care, health maintenance, and immunizations can ensure that appropriate care is given. Consistent with state law, children needing invasive procedures, or those with serious medical problems, should have their parents notified and involved in their care by the hospital or clinic providing the care. Some state consent laws for mature minors include emergency treatments.

Personal medical and psychiatric information is considered confidential, and release of information is protected and regulated by state and federal laws. New federal regulations (Health Insurance Portability and Accountability Act) will be the focus of much attention and probable litigation for the next few years in regard to the confidentiality of medical records. Confusion exists about whether the regulations apply to correctional facilities that do not do electronic billing. However, the HIPAA Privacy Regulations will almost certainly apply when third-party health care providers are involved. It is important for all staff, including correctional and judicial officers, to respect the confidentiality of medical information. Intrusive requests regarding sensitive information such as STIs, sexual orientation, and HIV status should be avoided unless the youth consents and there is a compelling need for the information. State laws that stipulate the manner of release of confidential information to parents without their adolescent’s consent should be obeyed.

Consent for Legal or Court-Ordered Medical Procedures

In some cases, such as person-to-person exposure to blood or bodily fluids, testing for hepatitis and HIV may be mandated. The youth may not refuse the testing and consent is not needed, but respect for human dignity and enhanced cooperation will be gained by explaining the nature of the testing and requesting that the youth consent in writing. This measured approach leads to cooperation in the future and a patient who does not require physical restraint for the procedure.

Out-of-Control Juveniles

Teenagers in controlled environments may become agitated because of mental illness, problems with anger management, or simple frustration. Management practices include seclusion, restraints (varying from handcuffs to four-point restraints), physical restraint (holding or pinning youths to the floor), pepper spray, and/or psychotropic medications. Each method may have an advantage over another, but they all have serious undesirable side effects. Some methods of behavior control, such as use of psychotropic medications, are prohibited for this purpose by various accrediting agencies and laws (American Correctional Association, 1991; NCCHC, 1999). However, forced psychotropic medication may be prescribed by psychiatrists in circumstances involving a serious threat of injury to self or others.

Children placed in seclusion are at special risk for self-injury and suicide; they require very close or constant monitoring. Seclusion should be used for only a few hours and avoided entirely for suicidal youths. Four-point restraints have been associated with deaths. Therefore, their use should be discouraged and, if used, the restraints must be applied properly and the youth monitored continuously. Pepper spray can prevent physical injury to staff and youths by avoiding fights or quickly ending them. However, allergic or idiosyncratic reactions to the spray have caused serious reactions for both youths and staff especially when very agitated persons have been sprayed (Pollanen, Chiasson, Cairns, & Young, 1998). Very upset youths may not be incapacitated by pepper spray, thus exacerbating the situation. Immediately after decontamination, i.e., a shower of sufficient length to remove all pepper spray, the youth must be evaluated by medical personnel. Application of anesthetic eye drops reduces the residual eye pain. Use of pepper spray requires careful monitoring, as there can be temptation to use it inappropriately.

First-line treatment should be preventive. Many youths, when approached in a sympathetic and caring manner, can be verbally calmed. Conversely, inappropriate verbal reprimands or threats by staff members can make the situation much worse. The medical team can work to ensure all staff members are taught appropriate verbal de-escalation techniques (Glick, Sturgeon, & Venator-Santiago, 1998; Morris, 1995), while simultaneously monitoring their institution for compliance. A
mechanism to identify and track personnel who demonstrate problems interacting with youths helps determine who needs further training.

Various organizations have wrestled with the issues of restraint. Because none of the currently available methods are ideal, ongoing innovation in methods of restraint is needed. All uses of restraint should be reported to the superintendent and tracked by the institution. All youths subjected to any restraint should be evaluated immediately by medical staff. Use of restraint may indicate the detention system’s failure to use more supportive, less intrusive means of managing youths. Auditing agencies should be sensitive to the need to monitor the use of restraints (NCCHC, 1999).

**Administrative and Custody Issues**

In juvenile correctional facilities, medical departments vary from a single physician and nurse on site at regular intervals to large staffs consisting of hundreds of medical personnel on site 24 hours a day. Regardless of size, two important rules apply: Medical decisions must be under the sole authority of a physician who ideally has special expertise in adolescent medicine or minimally, in pediatrics. Second, it is a best practice to have the medical director report to a medical authority, not to the institution’s administrator. The medical department and custody officials should work together, but a separation of powers and avoidance of coercion are better maintained through separate lines of authority (Hein et al., 1980). An experienced medical director will be aware that medical staff may identify with corrections workers to the detriment of their teenage patients (Morris, 1995). Close oversight and in-service training contribute to supporting the care-providing mission by non-judgmental, responsive interaction with the youths detained in their institution.

Long-term service in closed institutions sometimes results in bureaucratic or “institutional” mentality. Allowing providers to do a variety of tasks, in-services, attending to the needs of providers, and staff attendance at seminars and educational programs outside the institution fosters an “esprit de corps” and maintains up-to-date practices. In larger institutions, university training programs have brought many advantages into facilities (Hein et al., 1980). Physicians-in-training (residents) are eager, interested, and good role models for the permanent staff and their juvenile patients. Trainee residents also gain valuable experience in adolescent medicine and issues regarding delinquent youths. The teaching physicians who accompany trainees bring the latest expertise to the institution. In an integrated system, youths with complex medical problems can receive care at the university or teaching program’s home hospital. The university can also act as a conduit for research proposals and funding. Successful administration of medical departments will lead to good care and a stable staff.

**Evidence Collection**

Incarcerated youths have no control over who provides their health care, and this impedes the necessary development of trust between the patient and care provider. To maintain a position of neutrality, the medical department of secure custody facilities should not engage in evidence collection or other corrections or judicial functions (NCCHC, 1999). When the youth and his/her lawyer request services, including evidence collection, the facility medical personnel may provide the requested services. However, great care should be exercised to ensure the youth is not coerced into agreeing to this arrangement. Generally, evidence collection should be done by an outside agency or provider to avoid compromising the medical care staff.

**Additional Concerns, Especially Safety Issues, and Duties of the Medical Department**

Woolf and Funk (1985) reported injury rates in a juvenile prison to be about three times those of boys involved in interscholastic high school sports and five times that for non-incarcerated delinquents. They further reported a rate of 1.2 injuries per person per year for incarcerated youths, with more than 50% requiring a physician’s involvement and 28% needing treatment outside the facility. Some detained youths were injured much more often. The rate of injury was greater for boys than for girls. However, 35% of girls in the studied institutions were injured. Injuries were greatest during the first months of long-term incarceration and involved a range of activities: sports, 36%; fighting, 20%; self-inflicted, 13%; suicide attempts, 9%; vocational studies, 8%; and horseplay, 3% (Woolf & Funk, 1985). Many injuries are avoidable. Written guidelines for safe physical activities
provide guidance and direction to custody staff. The medical staff could make recommendations to improve safety and instruct appropriate personnel on how to inspect equipment. Having a certified athletic trainer as one of the corrections officers provides valuable expertise in preventing and treating sports injuries. Periodic safety inspections of the facility, especially with regard to suicide hazards, can eliminate structural elements that can be used as a weapon or to cause self-injury.

Psychological factors that can lead to injury may be part of the institution’s culture. Poor coordination between medical and custody staff along with hyperactivity and low intelligence on the part of the youths may allow some teens to behave in a dangerous manner. The use of exercise as punishment is also a concern. Repeated large muscle contractions against a heavy load can result in damage and death of muscle tissue that can cause pain and renal damage. When poorly trained staff fail to address signs of stress in youths, the adolescents may strike out. The medical staff should be alert for the possibility of intentional aggravation or injury of youths by staff. When incarcerated youths were surveyed in 1996 by Office of Juvenile Justice Delinquency Prevention (OJJDP) staff, 20% (± 4%) said they did not feel safe (Parent et al., 1994). Most of these youths (69%) feared other youths while the other 31% did not designate of whom they were afraid. There was concern that some of these youths feared the staff. Since there is also a positive correlation between crowded conditions and injuries inflicted by juveniles on staff (U.S. Department of Justice, 1994), the community should ensure adequate living space in their juvenile correctional facilities. A close working relationship between the superintendent and the medical director allows a united effort in preventing abuse and injury to minors in the institution.

Incarcerated teens engage in all types of risk behaviors (Morris et al., 1995; Morris et al., 1998) and often fail to attend school, thereby missing health education. During detention, the health department can use many situations to present health maintenance messages. One-on-one medical encounters involving specific illnesses or risk behaviors present opportunities for individual counseling. There should be adequate staff to make these types of interactions possible. Group education in waiting rooms and school classrooms can be provided by health educators, video programs, or specially trained teachers. Youths respond better to ongoing education that uses a number of modalities and allows them to have behavioral practice sessions, such as trying out refusal skills (Kamb et al., 1998; National Institute of Mental Health, 1998).

The medical department should also take an active role in educating custody workers in health-related areas, such as disaster preparedness, HIV transmission, universal precautions, methods of disinfection, suicide risk assessment and prevention, safe athletic participation, and injury avoidance. A medical staff that is accessible to the institution’s employees fosters mutual respect and confidence. As violence and health risk behaviors remain the two biggest threats to the lives of teens (Yeager & Lewis, 1990; Laub & Vaillant, 2000), medical care providers and corrections staff should focus on these areas (Schlapman & Cass, 2000).

Financial Issues

Because federal rules prohibit the use of Medicaid funds for most persons in correctional facilities, the cost of medical care for incarcerated juveniles falls to the local and state jurisdiction(s). Several distressing results flow from this federal policy, including competition for funds between the custody and medical departments. Public safety is the primary concern surrounding delinquent youths, so the custody portion of the operation may have an advantage in controlling the funding. Small, rural, or financially impoverished areas have limited government resources to spend on correctional facilities generally and medical care specifically. Additionally, lack of funds eventually translates into reduced medical and psychiatric care as well as limited or nonexistent rehabilitative services. This means youths may leave institutions ill, injured, and unrehabilitated. The public at large and youth advocacy groups can improve this situation by influencing the federal government to release Medicaid funds for incarcerated juveniles. Working with local governments to improve funding can also help. State and federal grants are available to augment or expand locally funded services. For example, the federally funded Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Program can be used to pay for the initial comprehensive medical and psychiatric assessment of youths entering detention. Governmental lead-
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ers and community-based organizations that focus on youths should advocate for adequate funding to provide appropriate medical care to detained youths.

Research

Grossly inappropriate research involving incarcerated populations has resulted in stringent limits on studies involving prisoners. However, prisoners have many legitimate medical and psychological research needs. Illnesses such as STIs, hepatitis C, and depression can be addressed by studies designed to reduce the incidence of disease or improve its detection and treatment for those in confinement. Rigorous evaluation of rehabilitative programs is also in the best interests of imprisoned persons. Of course, any attempt to study prisoners and their specific problems must be balanced so the welfare of individuals is not compromised. Federal agencies advocate for appropriate research and have built-in safeguards for all research involving prisoners including stipulating the types of permissible research (U.S. Department of Health and Human Services, 1991). Medical personnel at large facilities should be involved as primary investigators or, at minimum, as collaborators with other investigators. The significant problems of our young offenders will not be solved unless and until we have made systematic attempts to study their treatments. Consent laws and regulations for participation in studies vary from state to state. Parental permission for youth participation in minimal risk studies (studies with risk equal to everyday life, such as drawing blood for medical evaluation and answering questionnaires) can be expensive and difficult to obtain. A judicial or state agency may be vested with authority to give permission for these types of studies. Conducting sound, ethical, targeted research will aid progress greatly in reducing the burden of crime and illnesses for juvenile delinquents. Cooperation is necessary among medical, custody, and judicial personnel to obtain funding for studies and to facilitate the conduct of research.

Conclusion

Careful screening and follow-up ensures that incarcerated teens will benefit medically during their custody and improve their chances for rehabilitation. The health and individual well-being of each minor in a correctional (detention or long-term) facility is the primary responsibility of the medical department. This includes advocating for youths in all aspects of incarceration.

The judicial officer’s authority allows the court to take the medical status of offending youths into account in determining the appropriate sentence. Additionally, at the time of release the court’s oversight can help ensure that youths continue to receive appropriate medical and psychiatric care after release from detention.

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