

The Abell Report

What we think about, and what we'd like you to think about

Published as a community service by The Abell Foundation

Childhood Lead Poisoning in Baltimore: A Generation Imperiled As Laws Ignored

Abell Salutes: “I Can’t We Can”; “Saving lives, winning souls.” Drug rehabilitation through “Divine intervention”

He says he has “done time in every prison in the State.” As an addict on the street, he has been shot five times, done his share of armed robberies, OD’d more than 20 times, lived for months at a time in the back seat of an abandoned car, lost his trucking business and his wife and three children. “But,” Israel Cason says, at age 51 and seated at his desk in his office at 2901 Clifton Avenue, “there comes a time in an addict’s life, as I told *The Sun* in an interview in 1999, when if he’s lucky and lives long enough, he says, ‘I’m tired.’” It seems to have taken all of those life experiences and losses to bring Israel Cason to where he is today—a recovering addict who is founder and chief operating officer of “I Can’t We Can” (ICWC)—a program that takes in a complex of transitional houses, apartments, and businesses (with gross sales in excess of \$250,000). ICWC has provided treatment to approximately 7,000 addicts since 1997 and has a high rate of success in assisting addicts in their goal of becoming productive citizens.

The “I Can’t We Can” community is made up of 20 transitional houses scat-

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It is the chief environmental disease affecting Baltimore City’s children, and it is entirely preventable. Three recommendations to avoid making our children victims of 45 years of catch-up.

Baltimore City children remain woefully unprotected from lead poisoning and its long-lasting harmful effects. Thousands of City children live in dangerous rental properties out of compliance with State law. Thousands are not identified, despite laws which require a routine blood test. If identified, available services are overburdened and fail to address the most serious of lead poisoning’s effects - developmental delays and cognitive impairment.

- At the current pace of cleaning up lead-laden rental properties, it will take at least 45 years to address only the most dangerous portion of the housing market - private rental units constructed before 1950 and not in compliance with State lead laws.
- Federal requirements to perform a blood test to identify lead poisoning in young children on Medical Assistance are violated for nearly half of eligible children in the City. Recent City and State laws extend this testing requirement to every City resident at ages 12 and 24 months. Penalty provisions in these laws are weak

and unlikely to be enforced.

- Services available to children who have been lead poisoned do not include educational interventions aimed at improving outcomes in school.

Background: A Generation Poorly Served

Lead poisoning is a persistent and elusive enemy endangering an entire generation of Baltimore City’s children. Because of historically lax enforcement of existing laws and insufficient funding of remedial programs, at the present rate of progress, at least 45 more years will elapse before the scourge of lead poisoning is conquered, and during those decades of inadequate action thousands of Baltimore City’s children living today, and thousands yet unborn, will be its victims. Effects are insidious; costs of the delay are high. Lead attacks the soft tissues in children’s bodies, especially their developing brains; it can cause learning and behavioral disabilities and lower intelligence; it can damage kidneys and other internal organs.¹

For the layman looking to understand

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the problems of lead paint in Baltimore as discussed in this report, definitions are in order: a common “blood lead test” measures the concentration of lead in the bloodstream. The result of the test (as expressed by the testing laboratory) is defined in “micrograms of lead per deciliter (about three ounces)” of whole blood. Lead levels in this report refer to this measurement. Negative effects on health and development have been documented at levels below 10. The federal Center for Disease Control recommends interventions at this level and considers children with a blood lead level above 10 “poisoned.” The Health Department tracks City children under age six whose blood level is 15 or higher.²

Childhood lead poisoning is the chief environmental disease afflicting children in Baltimore, yet it is entirely preventable.³ The problem: Tens of thousands of old, poorly maintained rental units in Baltimore’s distressed neighborhoods remain untouched by State and local law enforcement efforts aimed at abating or compelling the clean-up of hazardous lead dust.⁴ Over the last two and a half years new government initiatives of abatement grants, court-ordered enforcement and consent agreements have produced plans for abatement of about 1,700 rental units. Of these, repair work is complete for about 200 units. This progress pales against the more than 32,000 rental units most likely to contain lead hazards.

The most common cause of lead poisoning is inhalation of lead dust that is released into the atmosphere when lead-based paint chips or deteriorates. Lead paint was used almost universally in residential construction until 1950, when the industry began the phase-out of lead addi-

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tives. It is notable that Baltimore City banned the use of lead paint in residential construction in 1951. Baltimore was the first U.S. municipality to enact such a law, though enforcement was weak at best. This law did, however, effectively keep lead-based paint out of public housing units, most of which were built after 1951.

The Odds Are Against Baltimore’s Inner-City Children

The key to preventing lead poisoning is to contain or remove the hazards that can expose a child to lead dust.

In Baltimore, one in every five children under the age of six is likely to be living in a rental unit built before 1950, the type of residences most likely to harbor dangerously high levels of lead-based paint dust. For children in the City’s poorer residential neighborhoods, the likelihood of living in low-income rental units

built before 1950 increases to one in four. The risk is especially grave in 11 ZIP Code areas targeted by the City and State as having the highest concentrations of lead hazards.⁵

Since 1994, rental property owners have been required to pay a registration fee to the State for all rental units owned of pre-1950 construction. Landlords are also required to perform specific periodic maintenance procedures to ensure minimum levels of lead safety. The maintenance is required at every tenant turnover and is to be verified by a State sanctioned inspection.⁶ Determining the extent to which Baltimore City property owners are compliant with the law is difficult. Many property owners registered but never had an inspection. The State reports the number of inspections performed but not how many units have been inspected multiple times, as is required in the case of turnover. Forty-eight percent of Baltimore City pre-1950 rental units have been registered with the State, and 34% of rental units built between 1950 and 1978 have been voluntarily registered. The second step, maintenance and inspection, is most important to protecting children. The State reports 39,000 inspections to date for units in the pre-1950 and 1950-1978 categories. Of these 14,000 are for public housing units, leaving 25,000 inspections among a total of 106,000 private rental units of pre-1978 construction. At most 25,000 private rental units are fully compliant – registered and inspected.

Bottom line: A conservative estimate is that 32,000+ units of the City’s 57,000 pre-1950 private rental housing remain untouched by Maryland’s lead law and City abatement efforts.

In January 2000, Governor Glendon announced a new investment of \$15

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million over three years for increased enforcement of State and City laws designed to help abate the lead paint threat in Baltimore City. The City made additional funding available as a match, including a \$3 million commitment from the Empowerment Zone program.

City and State agencies, focusing on Baltimore's lead paint crisis, project that over the three-year life of the initiative 750 housing units will be improved through grants and loans for rehabilitation, blood-lead testing rates will rise, and enforcement actions resulting in clean-up of rental properties will increase. Progress on the goals of the initiative by two City agencies and three State agencies is reviewed at bi-weekly meetings under the purview of the Baltimore City Health Commissioner.

The City/State initiative is focused on the 11 ZIP Code areas⁷ selected by the State Department of Health and Mental Hygiene (DHMH). These areas comprise a ring around the central downtown district and include 148,000 occupied housing units, of which approximately half are owner-occupied and half renter-occupied. In these targeted ZIP Code areas, over 60 percent of the housing units were built before 1950 and 52 percent of the rental units have a rent below the median for Baltimore City.⁸ Over 7,000 children under the age of six live in the oldest, most poorly maintained rental housing in the target areas.⁹ They are the prime potential victims of lead poisoning.

From mid-2000 through mid-2002, the first two years of the State and City lead initiative, treatment procedures have been completed or initiated in 1,720 units. Fifty-two housing units were treated for lead removal or containment ("abated") with public financing and 123 had loans approved. Seventy-six City enforcement actions resulted in treated units, and City enforcement attorneys filed an additional

267 complaints seeking lead treatment. The enforcement staff of the Maryland Department of the Environment (MDE) obtained consent agreements from property owners covering the treatment of approximately 1,200 units. This total reflects the optimistic assumption that property owners who signed consent agreements with the MDE will comply promptly and fully. This estimate also counts properties that have rehabilitation loans settled but work not underway or incomplete. If all units cleaned up or ordered to be repaired were pre-1950 rental housing (they are not), then the total would represent, at most, 5 percent of the City's pre-1950 rental housing not yet touched by State lead laws. If the City and State continue to address the problem at their current rate of progress (approximately 700 units a year over the last two and a half years), it will take more than 45 years to remove the lead poisoning threat in just those Baltimore City rental units built before 1950, and not already inspected by the State for compliance with the laws requiring maintenance and repairs to reduce lead exposure.

These figures indicate a marked improvement on past efforts, yet they can only be seen as a glaringly inadequate response to the crisis.



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State officials have not said what will happen when the current initiative ends in 2004.

Problem: Identifying Victims

According to the latest figures, there are approximately 3,000 known cases of elevated blood-lead levels among children ages birth to six in Baltimore City, and State officials report decreases in the percent of children tested who are found to have an elevated blood-lead level. In 2000, 12.2 percent of City children ages birth to six who were tested had an elevated blood-lead level, compared with 26.4 percent in 1994, a reduction of 53 percent. This is encouraging news, but testing of children during those same years also went down to just 35.8 percent in 2000, compared with the 50 percent of eligible youngsters who were tested in 1994. This represents a 39 percent drop in the proportion of children tested, even while the laws requiring such testing were toughened.¹⁰

But because mandates to test children are not met, however, only some affected children are identified.

- Federal law requires that all children enrolled in Medicaid receive a blood-lead test at the ages of 12 and 24 months as part of the Early Periodic Screening, Diagnosis and Testing (EPSDT) service. State Medicaid agencies are required to report the number of Medicaid-eligible children who have received a blood-lead test to the Centers for Medicare and Medicaid Services.¹¹
- The 2000 Maryland General Assembly passed House Bill 1221 to explicitly require a blood-lead test for all 12- and 24-month-olds in at-risk ZIP Code areas, not just those on Medicaid.¹² By September 2003, children living in designated high-risk areas, including all of Baltimore City must have a blood-lead test to

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enter pre-kindergarten, kindergarten, or first grade.

- A Baltimore City ordinance passed in 2000 while the State bill was pending requires universal blood-lead testing for children at 12 months and 24 months of age.¹³
- MDE maintains a Childhood Lead Registry of all blood lead tests in the State. All laboratories are required to submit test results to the registry.

Only about one-third of Baltimore City children from birth to six and just over half of one- and two-year-olds were tested in 2000. Data from 1998 through 2000 show an increase in testing rates for one- and two-year-olds from 42.8 percent in 1998 to 57 percent in 2000.

In 2000, 2,189 Baltimore City children under age six had elevated blood lead levels and 775 had a result of 15 or more. Of these, 200 were new cases of lead poisoning. The remainder had had previous reports of blood lead levels requiring a referral to the Baltimore City Health Department. However, since only a portion of City children have been tested, there are children with lead poisoning who are not identified and included in these numbers. We do not know how many. Also in 2000, there were over 500 City children under the age of two, with a reported blood lead levels of 10 to 14. These young children are not referred for services and will not be counted as new cases until they have a test with result of

15 or higher. Data show that toddlers with a blood lead level of 10 to 14 are very likely, later on, to have a test result of 15 or more.

Very simply, federal requirements to test for lead all children on Medicaid are not being met for Baltimore City children. The responsibility lies with managed care organizations who serve those who are Medicaid eligible under a State contract, State monitoring of performance of those contracts and with lack of awareness on the part of pediatricians and parents.

In areas with a high rate of poverty, where the housing stock is predominantly older and renter-occupied, DHMH estimates that 16 to 20 percent of children from birth to age six have been exposed to dangerous levels of lead dust, enough to result in a blood-lead test result of 10 or greater. For the City census tracts with high homeownership and low poverty, the risk of lead exposure is much lower (less than 5 percent). DHMH has classified census tracts and ZIP Codes as areas of high, moderate, low, or negligible risk for exposure to lead hazards. The classifications are based on known prevalence of elevated blood-lead levels, age of housing stock, amount of rental housing and poverty rates.

When the DHMH's projected prevalence of childhood lead poisoning for each census tract is multiplied by the population of children under six years old, the result is that over 5,000 children are at risk due to elevated blood-lead levels – more than double the number of children actually identified in 2000 (2,189).

The Response: Evaluating the Preventive Measures

The Baltimore City Health Department's Community Lead Poisoning Prevention Program (CLPPP) is responsible for responding to every report of a lead level 15 or greater in a child six years of age or younger. The same level triggers initiation of enforcement actions. Upon receiving the report, CLPPP environmental health inspectors investigate conditions in the residence where the child lives and cite the property owner if housing violations creating lead hazards are found. If the owner fails to comply with a CLPPP work order, the City can and usually does, take further legal action. The State can also initiate an enforcement action triggered by an actionable blood lead report or a landlord's noncompliance with requirements to register with the MDE and maintain safe housing conditions.

A staff of five CLPPP employees—three community health nurses and two lead paint investigators—responds to an estimated 200 to 300 new cases each year and monitors more than 1,500 open cases. Each nurse has an open caseload of 400 to 500 children. Initial home visits are completed for more than 90 percent of the new cases referred, often requiring several attempts. In many cases, though not all, educational materials are provided to the family about nutrition and cleaning methods designed to reduce lead dust. The staff also monitors subsequent lead tests.

CLPPP case records do not indicate a significant number of referrals for additional services. CLPPP clients are not aided directly with housing relocation, nor does the Health Department systematically refer children for developmental assessments. The volume of CLPPP cases inhibits the agency's providing more than minimal contact with most families. One reason the CLPPP caseload is so large is the agency's prac-

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Percentage of all Baltimore City children having a blood lead test, ages 0-6 and ages 1 and 2, 1998-2000

	1998	1999	2000
Percent tested, ages 0-6	31.5	31.4	35.8
Percent tested, ages 1-2	42.8	47.0	57.0

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tice of keeping a child's case open until he or she turns six years old.

While most of the 200 children with new cases of lead poisoning in the year 2000 received a home visit from the Health Department, follow up with ongoing cases (estimated to be 1,500) was inconsistent. An overlapping group of about 200 children were served by lead clinics at two hospitals and/or the Coalition to End Childhood Lead Poisoning. Without even assessing the quality of these services, capacity alone is inadequate to meet the needs of the 2,000 reported cases of lead poisoning (level of 10 and over) in the year 2000. None of the agencies serving lead poisoned children are providing intervention services designed to improve the educational and social development of these youngsters.

Impact

Children with lead poisoning are likely to experience developmental or cognitive impairment that will impede their education and add to Baltimore's

special education rolls. Substantial and compelling research has established a strong association between the exposure of a young child to lead and later, in that same child, delinquent and criminal behavior.¹⁴ Today, well over 3,000 Baltimore City children have a history of elevated blood lead levels and as a result may be experiencing serious, life-altering learning problems. Every year several hundred new cases are found. Their numbers are contributing to Baltimore's swelling population of youngsters requiring Special Education.

Data for a group of Baltimore City school-aged children with reported histories of lead exposure who had received housing services show a correlation between having had an "elevated" blood lead level¹⁵ (10 and over) and being enrolled in Special Education services. The records were of 334 children whose birth dates placed them in grades 1 through 6 in the last three school years (1998-2001). As the first reported blood lead level increases, the percentage of children receiving Special Education services

more than doubles, from 17% for children with an initial report of under 15, to 38% among children with an initial report of 30 or higher. For a group of 50 children who were in first grade in the 1998-1999 school year, the correlation was stronger. Fourteen percent of children with blood lead levels under 15 received Special Education services compared to 56% for children with reports of levels at 30 or higher.¹⁶ The Citywide percentage for all elementary school children enrolled in Special Education is 14.5%.¹⁷

In 2000, the Kennedy Krieger Institute began a small pilot program of intensive academic and behavioral remediation for 10 children who at enrollment were completing first or second grade and who had previously been seen at Kennedy Krieger because of a documented blood-lead level of 20 or greater. The intention was to assess the children fully, conduct an intensive summer program, continue with a follow-up program several afternoons per week during the school year, and re-evaluate the students after these interventions.

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Mean Percentages of Students receiving Special Education Services According to Lead Level, grade 1, school year 1998/99, 50 cases in the analysis

Range of initial blood lead level	Percentage receiving special education services
< 15	14%
16 – 20	24%
21 – 29	31%
≥ 30	56%

Mean Percentages of Students Receiving Special Education Services According to Lead Level, all grades, 1999/2000, 334 cases in the analysis

Range of initial blood lead level	Percentage receiving special education services
< 15	17%
16 – 20	22%
21 – 29	21%
≥ 30	38%

Citywide percentage of elementary school students receiving special education services = 14.5%

Testing at the start of the program showed that all of the children had Attention Deficit Disorder, and three-quarters suffered from Attention Deficit-Hyperactivity Disorder. Initial testing showed lower than average IQs overall, below-average reading comprehension, and several other developmental deficits. Modest (statistically insignificant) gains were noted during the post-testing period on specific pre-reading skills. As a group, these children remained developmentally below average for their age. More consistent improvements were documented in behavioral and “readiness-to-learn” measures.

The preliminary data from this small yet comprehensive study demonstrate the enormous challenges of implementing effective remediation for children who have completed first through third grades. By the time they reached elementary school, these children had developed significant and persistent barriers to learning that were immensely difficult to overcome. This unhappy circumstance brings up the question of whether earlier intervention could make a difference for lead-poisoned children as it does for children whose learning deficits are linked to other causes.

Upon review of this pilot program, Kennedy Krieger Executive Director Dr. Gary Goldstein recommended that all children with a blood-lead level above 20 be referred to the Baltimore Infants and Toddlers Program of the Baltimore City Health Department for evaluation, and that a model program be established in one of Baltimore City’s preschools that would be available to young children with lead poisoning.

The data on lead exposure and special education enrollment and the experience of Kennedy-Krieger’s pilot program reveal lead to be a risk factor contributing to the children’s high rate of attention and

learning problems. In addition to citing lead as a contributor to these problems, the strong association suggests that a positive blood lead test is reliable marker of a child at high risk for learning difficulties. Lead interferes with neurological development and it is often present with other factors that increase a child’s vulnerability. By finding more of the children with lead poisoning, we will find an increased number of children at risk for learning and behavior problems that will later require costly special education services.

Early Intervention: The Missing Piece?

The potential of early intervention to mitigate the learning difficulties experienced by lead-poisoned children is not being tested.

Research on child development underscores the importance of the first years of life, when neurological growth and advancement—the development of the body’s own biological tools for learning—is most rapid. A developmental delay or disability will impede the child’s ability to learn and interact with his surroundings fully. Unaddressed deficits can result in lifelong learning problems. Studies have shown that early intervention programs can mitigate learning and attention problems and improve the odds of success. The key is early identification and intervention with the right type and intensity of services.¹⁸

Awareness of this “key” has led to the creation of federal and State-funded programs that aim to identify developmental problems as early as possible and provide services to minimize the impact of existing learning difficulties and prevent future ones. When a developmental delay, from whatever unexplained origin, is suspected in a child less than three years of age, a referral can be made to the Baltimore Infants and Toddlers Program of the Baltimore City Health Department—a valu-

able resource but one that currently is not being used in the battle against childhood lead poisoning. When a youngster is referred to the Baltimore Infants and Toddlers Program, he or she is evaluated by a developmental pediatrician and therapists in several disciplines, such as speech pathology and physical therapy. If the child needs remedial services, an Individualized Family Service Plan, or IFSP, will be created with specific goals for the child, services to be delivered, and a service location. The child’s needs and the IFSP are reviewed regularly to assess progress and make adjustments.

The State has the discretion to enroll, monitor and serve children it considers at risk for developmental problems in order to study the value of providing early intervention services. If the State mandates, lead-poisoned toddlers could be enrolled in the Infants and Toddlers Program; they would then be assessed regularly. Early diagnosis would be made of problems with cognitive, motor or social development. Such prompt implementation of remedial services might improve the long-term outcomes for these children.

Baltimore Infants and Toddlers staff reports that children found to have a blood-lead level of 40 can be referred without meeting other criteria for evidence of delay, but it is not clear that all medical providers are aware of this. At the present time, referrals based on blood-lead level are not made routinely.

Given the scale of the lead hazards present in the City’s housing stock and the slow pace of current abatement efforts, primary prevention of lead poisoning will arrive too late for thousands of Baltimore children trapped in substandard housing. They will be exposed to dangerous amounts of lead over the next few decades. It is imperative that case management services are improved in reach and quality and that the potential of early

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intervention services to improve the academic outcomes of lead-poisoned children be tested.

Recommendations

These specific steps should be considered for finding and treating lead poisoned children more efficiently:

I. Increase the number of children under the age of six who receive a blood-lead test, particularly one- and two-year-olds, as required by law. Hold managed care organizations (MCOs) serving children on Medicaid accountable for making progress on testing.

- DHMH should produce a list for each MCO of children eligible for medical assistance from birth to age six who have not been screened, so that targeted outreach efforts can be undertaken to find them. DHMH has succeeded in matching its enrollment records to the Lead Registry. MCOs and providers need to be held accountable for improved performance with sanctions for unmet goals and/or incentives for improved performance.
- Routine blood-lead screening should be done for all pregnant women in high-risk areas. Education and training should be provided to ob/gyn providers.
- The City should develop a program of opportunistic screening, obtaining parent/guardian permission to run a blood-lead test on any patient in a pediatric emergency room or clinic that needs to have blood drawn for any reason.

II. Decrease the number of children exposed to dangerous amounts of lead by improving housing condi-

tions in the lowest end of the rental market where lead hazards are concentrated and expanding options for relocation to safe housing.

- Enforcement efforts, significantly improved with the City-State lead initiative, should continue. Additional public funding is needed to increase capacity. More units will have been addressed through State enforcement action, about 1200, than by any other aspect of the current initiative. The commitment and efficiency of the State enforcement should be recognized and strengthened with additional funding. Continued vigilant monitoring of agreements already reached with property owners is crucial.
- The City must find ways to improve the process of distributing grants and loans for lead abatement. As of early 2002, the average time for processing a grant application was more than five months, and the pace of spending new State funds was significantly below projections. Privatization of the loan process should be considered.
- The need for relocation resources to shorten the length of exposure to dangerous conditions cannot be overemphasized. More direct help with finding safe housing should be made available so more families can receive relocation assistance.
- The Housing Authority of Baltimore City should provide Section 8 rental subsidy certificates to enable families with very young children to move from unsafe housing.

III. Improve coordination of services to children with elevated blood-lead levels. Develop a pilot project to refer children with elevated blood-lead levels to the Baltimore Infants and Toddlers Program and

Baltimore City Public School System (BCPSS) Office of Preschool Services.

- The State Department of Health and Mental Hygiene and Department of the Environment should lead an effort to convene all agencies, public and private, that serve City children with elevated blood-lead levels. Standards should be established for improving the process for identifying youngsters with elevated blood-lead levels and for providing a more comprehensive set of services, including a formal relationship with the Baltimore Infants and Toddlers Program.
- The Baltimore City Health Department should evaluate its case management services for effectiveness. Consideration should be given to changing its practice of following children until age six in order to provide more services to younger children over a shorter period of time.
- Baltimore Infants and Toddlers should pursue development of a project in which young children with elevated blood-lead levels are regularly and comprehensively evaluated with respect to all aspects of their development. The project should include an evaluation to determine the effectiveness of any interventions provided and the cost effectiveness of providing services to this group. The project should be developed with the input of local expertise at Mt. Washington Pediatric Hospital, the Kennedy Krieger Institute, the Maryland State Department of Education, and the Baltimore City Public School System Office of Preschool Services.

Endnotes:

- ¹ Alliance to End Childhood Lead Poisoning, "Childhood Lead Poisoning: Blueprint for Prevention," 1991, p. 6.
- ² The Baltimore City Health Department follows a City child upon the first report of a blood level of 15 until age 6, or until other closure criteria based on lead tests are met.
- ³ Alliance to End Childhood Lead Poisoning, "Childhood Lead Poisoning: Blueprint for Prevention," 1991, pg. 4.
- ⁴ The Maryland Reduction of Lead Risk in Housing Law (HB760, 1994) requires owners of rental property to register units built before 1959 and to perform specific maintenance measures at each turnover. A State certified inspection verifies compliance. At most 36 percent of the City's pre-1950 rental units are in compliance.
- ⁵ 21205, 21211, 21213, 21215, 21216, 21217, 21218, 21223, 21224, 21230, and 21231.
- ⁶ See note iv.
- ⁷ 21205, 21211, 21213, 21215, 21216, 21217, 21218, 21223, 21224, 21230, and 21231.
- ⁸ US Census, 2000. Baltimore City median rent is \$409/month.
- ⁹ A conservative estimate assuming even distribution of children among all housing units in the 11 zip codes. Rental units under the median rent = 23 percent of all housing units; 23 percent of all children under 6 years old = 9,111.
- ¹⁰ Maryland Department of the Environment Childhood Lead Registry.
- ¹¹ The State Medicaid Manual, Part 05 – Early and Periodic Screening, Diagnosis and Testing (EPSDT) Services, 5123.2D9(1).
- ¹² HB 1221, 2000, Amends Education Article, Sec 7-403; Environmental Article Section 6-303 and 6-304; Health article Section 18-106. Maryland Department of Health and Mental Hygiene (2000). Targeting Plan for Areas at Risk for Childhood Lead Poisoning. Childhood Lead Screening Program, Center for Maternal and Child Health. Community and Public Health Administration. <http://mdpublichealth.org/och/html/stp.html>.
- ¹³ City Council Bill 00-0044, 2000. Amends Health Article of the Baltimore City Revised Code.
- ¹⁴ Needleman HL, Reiss JA, Tobin MJ, Biesecker GE, Greenhouse JB. (1996). Bone lead levels and delinquent behavior. *Journal of the American Medical Association*. Feb 7; 275(5):363-9. See also Needleman H, Schell A, Bellinger D, Leviton A, Allred EN (1990). The long-term effects of exposure to low doses of lead in childhood. An 11-year follow-up report. *New England Journal of Medicine* 324 (2):83-88
- ¹⁵ In Maryland blood lead test results show an "elevated" level at 10 micrograms per deciliter of blood. This is the "level of concern" determined by the federal Centers for Disease Control based on research on the effects of lead. In Maryland a level of 15 triggers a referral to the local health department and a child with a level of 20 or higher is considered "poisoned".
- ¹⁶ Blood lead data were reported to the Coalition to End Childhood Lead Poisoning over several years. All complete records for children who would currently be in elementary school were coded to protect identity and matched with Special Education enrollment.
- ¹⁷ Maryland School Performance Assessment Program, Maryland State Department of Education.
- ¹⁸ Examples include: Guralnick MJ, The next decade of research on the effectiveness of early intervention. *Exceptional Child*, 1991. Oct-Nov, Vol 58, No.2, pp 174-83.
Ward S. (1999) An investigation into the effectiveness of an early intervention method for delayed language development in young children. *International Journal of Language and Communication Disorders*. July, September, Vol 34, No 3, pp 243-264
Ogi, S et al. The developmental effects of an early intervention program for very low birth weight infants. *No To Hattatsu* 2001 Jan, Vol 33 No 1, pp 31-36 and,
Matsucishi, T et al (1998) Early Intervention for very-low-birth-weight infants. *Brain Development*, Jan 1998, Vol 20, No 1, pp 18-21.
Ramey CT Ramey SL. (1998) Prevention of intellectual disabilities: early interventions to improve cognitive development. *Preventive Medicine*. Mar-Apr Vol 27, No 2, pp 224-32.

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tered throughout the City where actual recovery programs are carried out; each is open 24 hours a day. "And sometimes suddenly," Cason says. "Guys come in stabbed and bleeding, women come in pregnant and crying. We turn nobody away. Everybody is personally assessed and assigned."

A day in a transitional house consists of three meals and three meetings a day. The meetings are 10:00 a.m., 2:00 p.m., and 7:00 p.m., and it is at the meetings where the addict become part of what Cason calls "our therapeutic community." "I teach from a text book, 'Learning to Live Again,' by Terrance Gorski, but the addict is expected to commit him or herself to our way—which is to understand that there must be an active relationship with the life force itself. It's that force that gives one's life meaning and purpose. The idea of 'divine intervention' is bound up with 'I Can't We Can' treatment. An addict must have something larger than him or herself to believe in. We're about saving lives by winning souls."

ICWC is able to add a very practical dimension to its treatment program. It provides work opportunities for its residents in businesses that it owns and operates—in trucking, catering, moving and hauling; it also maintains a barbershop and a recording studio.

But if ICWC is about lives and souls, it is also about answers. "I know what it took to save my soul," Cason says. "It wasn't people. It was, it is, divine intervention."

Abell salutes the "I Can't We Can" program for many reasons—its unique approach, grass roots orientation, been-there-done-that leadership; but mainly because it's working.

"Childhood Lead Poisoning in Baltimore: A Generation Imperiled, As Laws Ignored"
is available on The Abell Foundation's website at www.abell.org or
write to: The Abell Foundation, 111 S. Calvert Street, 23rd Floor, Baltimore, MD 21202