

Pittsburgh Post-Gazette®

Program screens moms-to-be for carbon monoxide

Wednesday, March 08, 2006

By Anita Srikameswaran, Pittsburgh Post-Gazette

When Sharon Dias went last month for a routine prenatal visit at a Magee-Womens Hospital outpatient clinic, she never imagined it would culminate with the fire department, an ambulance and the gas company at her front door.

At the appointment, in addition to the usual weigh-in and urine testing, Ms. Dias was asked to exhale into a device that measures carbon monoxide level. The results were several times above normal, the equivalent of a three-pack-per-day habit.

But she neither smokes nor lives with anyone who does. So the staff asked whether she smoked marijuana, or had a job where she might be exposed to carbon monoxide.

"None of those things rang true," said Pam Dodge, the hospital's director of ambulatory care. Then, "we thought about furnaces and carbon monoxide in the house."

A social worker called the gas company and fire department to go to Ms. Dias' Wilksburg home, a house that had been converted into apartments.

"By the time she left her appointment and got to her street, it was all cordoned off," Ms. Dodge said. Carbon monoxide readings in the house were about 140 parts per million -- high enough to cause headaches, fatigue, dizziness and nausea.

Ms. Dias had been having headaches and felt sleepy, which she attributed to her pregnancy. "Who knows how long I'd been breathing it in," she said. Her 3- and 6-year old sons didn't complain of feeling ill, but it turned out that her upstairs neighbor had been feeling tired and headachy, too.

The furnace, which had a cracked heat exchanger, was replaced and the air soon normalized.

When Magee clinic staff, in conjunction with UPMC Health Plan, started prenatal carbon monoxide screening about three months ago, they hadn't expected to identify faulty



John Heller, Post-Gazette

Sharon Dias, holding her newborn son, Damar, and her older sons, Darnell 6, left and Dante, 3. A faulty furnace in their Wilksburg apartment put them at risk of carbon monoxide poisoning.

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furnaces as a culprit. The aim of the program is to help health care providers and moms see some of the tangible effects of smoking.

"We'd been concerned about smoking in pregnancy for quite a while," Ms. Dodge said.

Among the 1,800 to 2,000 annual births at the clinic, "about 50 percent of the women whom we see are smokers," she said. "It's a statistic that just won't go away."

The program tracks smoking patterns by monitoring carbon monoxide levels, which are elevated in smokers. Pregnant smokers could then be referred to cessation programs and, if they can't quit, encouraged to at least cut back on cigarettes.

According to the U.S. Centers for Disease Control and Prevention, smoking during pregnancy can lead to babies that are premature or have low birth weights. Maternal smoking is also a risk factor for Sudden Infant Death Syndrome, or SIDS.

For the carbon monoxide test, the patient takes a breath, holds it for 15 seconds and then exhales into the handheld device, which promptly displays the result. "So we can see it, our pregnant woman can see it," she said. "That often starts a discussion."

One woman with an elevated reading initially denied smoking anything, but later confided to a social worker that she had smoked marijuana, Ms. Dodge said.

Sometimes a mom-to-be will say she stopped smoking when she got pregnant. The test can provide some concrete, measurable information about her progress.

"It's hard for a woman to stay quit during pregnancy," Ms. Dodge noted. "If she does go back and starts to smoke, it shows up on the monitor. Then we can counsel her."

If a woman has low readings in three visits, she can stop having the tests. Of course, she can refuse the test, which is routinely offered to pregnant women regardless of their smoking status.

"We'll learn a lot from the women who are smokers and do this throughout the pregnancy," Ms. Dodge said. "I think that will help us think about how we proceed in the future."

If she hadn't had her level checked, Ms. Dias, her family, which now includes a healthy newborn son, and her neighbor might have been killed by carbon monoxide poisoning.

As she put it, "Some day someone could have knocked on my door to come visit, and I'm not waking up."