

Accurate diagnosis of high blood pressure: tougher than you think

By ACSH Staff — July 8, 2013

Man checking blood pressure

[1]Hypertension, or high blood pressure (HPB), is many things: very common and more so as we age; a key risk factor for all types of cardiovascular diseases, the most frequent killer of Americans (and Europeans); easily detectable and treatable.

Unfortunately, that last assertion is false. Sure, blood pressure can be relatively easily checked, in doctors offices, pharmacies, clinics, etc. But one BP reading is often inaccurate and misleading (white coat hypertension is one well-known example, in which people with normal BP have an anxiety-induced rise to dangerous levels when in the office). Further, while most HBP can be controlled with lifestyle alterations and safe, cheap medications, many cases require much more intensive therapy with multiple, expensive and/or toxic drugs. Worst of all, given the consequences, well over half of all Americans with definite HBP have either been under-treated or may not even know they have HBP.

In the [most recent JAMA](#) [2], a team of researchers (physicians, pharmacists, and educators) from the Health Partners group in Minnesota designed a study called Home Blood Pressure Telemonitoring and Case Management to Control Hypertension (HyperLink), led by Dr. Karen Margolis. Their goal was to get frequent BP readings from patients at home over the course of their normal day; collect and store those readings; and transmit them at regular intervals to specialized pharmacists whose role would be to adjust medications as needed. The key: the patients would be able to skip costly and inconvenient doctor visits, while also avoiding situational-induced factitious BP readings.

The study subject were a broad-based group of 450 men and women whose average age was 61, and came from many ethnic and demographic groups. They were randomly selected to receive usual care or home monitoring and treatment adjustments based on it. After 12 months, almost three-quarters of those on home monitoring had normal BP measurements as compared to about one-half of the usual-care group. Better still, the improvement was maintained at 18 months six months after the study ended.

An [editorial in the same journal](#) [3]by Drs. Magid and Green pointed out that of the 76 million hypertensives in the U.S., less than half have their BP under control. They state that on average, six different clinic visits are needed to gauge BP accurately at an 80% confidence level. The home monitoring method vastly simplifies this or would do so, if certain regulatory and economic obstacles can be overcome.

ACSH s Dr. Gilbert Ross was most impressed by the data and results, and by the editorialists clever analogy: They compared what could be the future of home BP testing to the situation only

twenty or so years ago, of banking and automation. The concept of banking from home is simple, but the regulatory structure of banking had to be revised, made more flexible. Similarly for home BP monitoring, reimbursement rates for supervising and collecting these data must be evaluated, or MDs will be reluctant to give up their bi-weekly BP check with its attendant reimbursement schedule. Also, the hardware itself should be a covered expense. Speaking from experience, measuring blood pressure, so simple superficially, is really a difficult task, and the normal variation makes everyone doctor, patient, family more anxious than need be.

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