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**Eliminating Ethnic Disparities in Diabetes Care**
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**Your Life Your Life Your Health**
*The Examiner*
**May 13, 2010**

SETMA's is a multi-ethnic, multi-cultural, multi-faith practice. This is true among the partners, the providers, the patients, and the management of SETMA. As a result, we are particularly sensitive to disparities in access to care, or in the outcomes of care for any group regardless of a discriminator which may describe or define any person or group of persons. There is no place this is truer than in the case of ethnicity. While nationally there are significant disparities of care between various racial groups, SETMA has worked hard to eliminate those differences..

With SETMA's COGNOS Project (see www.jameslhollymd.com Your Life Your Health under COGNOS Project), we are now able to understand the processes and outcomes of the care we delivery to all of our patients and to compare those processes and outcomes by ethnic groups, gender groups, socio-economic groups and other categories. The following are SETMA's 2009 results for treating 6,238 patients with diabetes. The goal is to successfully treat all patients with diabetes to goal and to eliminate totally ethnic disparities in the care of diabetes. SETMA's results are good and do demonstrate that ethnic disparity of care has been dramatically decreased particularly in the care of diabetes.

However, our goal is to improve our performance in 2010 and to eliminate completely ethnic disparities. For diabetes, one of the measures we are tracking is HgbA$_{1C}$ which is shorthand for "Hemoglobin A$_{1C}$"and is pronounced "hemoglobin A one C." The HgbA$_{1C}$ estimates the plasma glucose (sugar) over the past three months. It is expressed as a percent. Normal values are below 6.0%. A patient with a value above 6.5% is diagnosed with diabetes. The treatment goal is a value less than 6.5% and the ideal is a value below 6.0%.

A normal person, who eats a healthy diet (high in complex carbohydrates – vegetables and fresh fruits and with restricted calories), should have a HgbA$_{1C}$ below 5.5%. Whether diabetes is "controlled" or "uncontrolled" is determined by whether the HgbA$_{1C}$ is below 6.5% (controlled), or above 6.5% (uncontrolled).

The following are SETMA's diabetes-care results comparing Caucasian patients with African-American Patient for 2009:

# SETMA's 2009 Results

| | Controlled - Caucasian | Controlled - African American | Uncontrolled - Caucasian | Uncontrolled - African American |
|---|---|---|---|---|
| Average | 5.762 | 5.821 | **7.479** | **8.713** |
| Std Dev | 0.377 | 0.376 | 2.234 | 2.427 |
| Mode | 5.8 | 5.7 | 7.7 | 7.3 |
| Median | 5.8 | 5.8 | 7.7 | 7.8 |

| | % | |
|---|---|---|
| | Controlled | Uncontrolled |
| Caucasian | 62.8 | 59.6 |
| African American | 22.9 | 29.6 |

Total numbers unique individuals:   4104 for Caucasians
2134 for African-Americans

Definitions:

- **Average (Mean)** -- this is the average HgbA1C values of all patients.
- **Mode** – this is the most common value which occurs in the group.
- **Median** – this is the value where half of the values are above and half of the values are below.
- **Standard Deviation** -- this shows how much variation there is from the "average" (mean) (or expected/desired) value. A low standard deviation indicates that the data points tend to be very close to the mean, whereas a high standard deviation indicates that the data are spread out over a large range of values.

The above data is for all Caucasians (4104 discrete individuals) and all African Americans (2134 discrete individuals) seen by SETMA during 2009 with the diagnosis of diabetes. The standard deviations, Mode and Median for both groups are essentially identical with the African-American group having a lower mode in the uncontrolled population and also having a lower standard deviation and mode in the controlled groups.

The only discrepancy is between the average (mean) between uncontrolled Caucasians and uncontrolled African-Americans. Rather than lament this, we are designing an aggressive plan for intervening in the care of the 31% of Caucasians and the 41% of African-Americans who are not controlled. Our goals will be:

- to decrease the number and percentage of uncontrolled patients in both groups,
- to decrease the standard deviations in both groups which will mean that a lower percentage of our patients will have poor diabetes control, and
- to eliminate the differences between the average (mean) between the two groups and

- to eliminate the difference between the percentage of uncontrolled in the two groups

**Designing a Quality Improvement Program**

The following steps will be taken in designing an initiative for improving the mean, the median and the standard deviation of the African-American patients (875 patients) and Caucasian patients (1,272 patients) who are not treated to goal in SETMA's 2009 audit:

A.  Employing SETMA's three break points for improving diabetes care. Between 2000 and 2008, in analyzing the care of our patients with diabetes, we found there were three years in which we dramatically improved that care. This year we will maximize our use of the three tools which produced those results:
    1.  Increase our use of the Diabetes Disease Management tool which we designed and launched in 2000.
    2.  Give all of our patient's whose diabetes is not controlled appointments to our American Diabetes Association (ADA) certified Diabetes Self-Management Education (DSME) program. Where necessary, in order to enable the patient to attend these classes, we will wave the fees.
    3.  Give all our patients, whose $HgbA_{1C}$ is above 8% and who have not been improving over the past six months, an appointment with SETMA's Endocrinologist.

B.  Make certain that all patients have at least three appointments with their PCP this year and that SETMA's Diabetes Treatment Plan and Plan of Care are completed and given to the patient at each visit.
C.  Sending each patient a personal letter announcing the program and giving them details about what our goals are and what their goals should be.
D.  Getting all Medicare Advantage patients regardless of physical conditioning involved in Nifty After Fifty and developing the ability of our-non Medicare Advantage patients to access this program.
E.  Continue to develop the Diabetes Day Event for November – sponsored by the SETMA Foundation
F.  Personally contact each of these patients about

      1.  Immunizations
      2.  Smoking Cessation
      3.  Losing Weight, Exercising and Stopping Smoking (LESS Initiatives)

G.  A personal telephone call to each patient this year in order to explain our program and to get them engaged in participating in it.
H.  Follow-up cards and letters for educational and motivational purposes.
I.  The following goals will guide this quality initiative:

      1.  Improving standard deviations to 1.5 or below

2. Improving the mean HgbA$_{1C}$ for Caucasians to 7.1% and for African-Americans to 7.9%
3. Improving the median of uncontrolled to 7.3% for Caucasians and to 7.3% for African Americans
4. Improving the percentages of each group who are not treated to goal: Caucasians 80% and African Americans to 75%
5. Other metrics will be established as a "budget" of what we expect this year from our effort.

These are the goals only for those who are not controlled. Our goals for those who are well controlled will be different and will be more aggressive.

## Improvement in the Mean, the Mode and the Standard Deviations

Our data shows that we have had progressive improvement in diabetes care every year between 2000 and 2009.

| Year | Median HgbA1C (%) | Change (%) | No. Tests Done |
|---|---|---|---|
| 2000 | 7.778 | | 555 |
| 2001 | 7.4789 | -0.299 | 1193 |
| 2002 | 7.4549 | -0.024 | 3036 |
| 2003 | 7.2671 | -0.188 | 4971 |
| 2004 | 7.2102 | -0.057 | 7080 |
| 2005 | 6.9847 | -0.226 | 7521 |
| 2006 | 6.8763 | -0.108 | 8610 |
| 2007 | 6.6265 | -0.250 | 9117 |
| 2008 | 6.5000 | -0.1265 | 6275 |
| | | | |
| Total Decline (2000 to 2008) | | -1.278 | |

The statistical analysis of our data for 2009 compared to 2008 shows that we have continued to improve in our median values and that our goal of improving our standard deviation was achieved. The following is a statistical analysis of SETMA's HgbA$_{1C}$ data for the period March 2009 through March 2010.

| | Average | Std Dev | Median | Mode | Count |
|---|---|---|---|---|---|
| Ahmed | 7.40 | 1.60 | 7.0 | 6.7 | 2121 |
| Anthony | 6.87 | 1.55 | 6.4 | 5.9 | 407 |
| Anwar | 6.70 | 1.24 | 6.4 | 6.1 | 652 |
| Aziz | 6.95 | 1.68 | 6.5 | 6.4 | 285 |
| Cricchio | 6.38 | 1.19 | 6.1 | 5.9 | 369 |
| Curry | 7.12 | 1.77 | 6.6 | 6.1 | 185 |
| Deiparine | 6.88 | 0.99 | 6.7 | -- | 6 |
| Duncan | 6.63 | 1.45 | 6.2 | 5.8 | 277 |

| | | | | | |
|---|---|---|---|---|---|
| Groff | 7.22 | 1.45 | 6.9 | 6.2 | 31 |
| Halbert | 6.79 | 1.75 | 6.3 | 5.9 | 616 |
| Henderson | 6.72 | 1.50 | 6.2 | 5.9 | 269 |
| Holly | 6.47 | 1.38 | 6.1 | 5.9 | 542 |
| Horn | 6.67 | 1.36 | 6.3 | 5.8 | 300 |
| Leifeste | 6.56 | 1.47 | 6.2 | 5.9 | 638 |
| Murphy | 6.51 | 1.21 | 6.2 | 6.0 | 900 |
| Satterwhite | 6.94 | 1.61 | 6.4 | 6.1 | 169 |
| Sims | 6.36 | 1.32 | 6.1 | 6.1 | 238 |
| Thomas | 6.48 | 1.47 | 6.1 | 5.8 | 343 |
| Vardiman | 6.74 | 1.70 | 6.4 | 6.5 | 155 |
| Wheeler | 6.54 | 1.23 | 6.2 | 5.9 | 288 |
| Young | 6.68 | 1.65 | 6.2 | 5.7 | 144 |
| | | | | | |
| SETMA | 6.82 | 1.52 | 6.4 | 5.9 | 8935 |

The following data is SETMA's HgbA$_{1C}$ for 2008.

PATIENTS with Diabetes ONLY

| Provider | Instances | Average | Std Dev | Median | Mode | Latest Value Average** |
|---|---|---|---|---|---|---|
| Ahmed | 2611 | 7.36 | 1.9081 | 6.8 | 6.0 | 7.25 |
| Anthony | 1912 | 6.87 | 1.4698 | 6.5 | 5.8 | 6.72 |
| Anwar | 3086 | 7.31 | 1.8300 | 6.8 | 6.2 | 6.92 |
| Aziz | 1772 | 7.41 | 1.7623 | 6.9 | 6.9 | 7.29 |
| Cricchio | 18 | 6.97 | 2.0353 | 6.1 | 5.6 | 7.05 |
| Curry | 42 | 7.05 | 2.3711 | 6.0 | 6.0 | 6.76 |
| Duncan | 1860 | 7.08 | 1.5776 | 6.6 | 6.4 | 6.71 |
| Fowler | 1281 | 6.34 | 0.0495 | 6.3 | 6.3 | 6.03 |
| Halbert | 2491 | 6.98 | 1.6540 | 6.5 | 6.0 | 6.80 |
| Henderson | 1099 | 6.91 | 1.6533 | 6.4 | 6.2 | 6.80 |
| Holly | 1701 | 6.99 | 1.6471 | 6.5 | 6.2 | 6.71 |
| Leifeste | 533 | 6.44 | 1.2941 | 6.1 | 5.7 | 6.41 |
| McClure | 1042 | 6.36 | 1.0143 | 6.1 | 5.6 | 6.21 |
| Murphy | 1388 | 6.67 | 1.5915 | 6.2 | 5.8 | 6.67 |
| Satterwhite | 41 | 7.14 | 2.3175 | 6.2 | 5.6 | 6.67 |
| Sims | 60 | 6.87 | 1.8085 | 6.3 | 5.5 | 6.66 |
| Vardiman | 1195 | 6.94 | 1.4570 | 6.6 | 6.2 | 6.58 |
| Wheeler | 1173 | 6.90 | 1.7408 | 6.5 | 6.2 | 6.68 |
| Wilson | 2092 | 6.97 | 1.4146 | 6.6 | 6.3 | 6.92 |
| Young | 124 | 6.55 | 1.2147 | 6.2 | 6.0 | 6.51 |
| Overall | 25521 | 6.99 | 1.6496 | 6.5 | 6.0 | 6.78 |

| Average |
|---------|
| 7.36 |
| 6.88 |
| 7.29 |
| 7.36 |
| 6.79 |
| 6.92 |
| 7.02 |
| 6.12 |
| 6.85 |
| 6.85 |
| 6.89 |
| 6.33 |
| 6.36 |
| 6.60 |
| 7.12 |
| 6.84 |
| 6.76 |
| 6.79 |
| 6.91 |
| 6.20 |

ALL PATIENTS

** Average value of each diabetic patients' most recen result.

In early 2009, SETMA began a process which was directed toward continuing our consistent improvement in the care of diabetes through 2009 and onward. Our 2009 data shows that we succeeded.

It is our hope that at the end of 2010 that we can report to you that we have totally eliminated ethnic disparities in the care of diabetes and in every other disease which commonly affects all of our patients.