Improving Blood Pressure Control in Ambulatory Care: An updated M.A.P.
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Background
The American Medical Association is working with Johns Hopkins University to improve hypertension control. Our work includes both technical and adaptive components and is focused on helping practices and health centers implement a basic improvement model (the M.A.P. framework). In 2015, we used lessons from our work in clinics and the recent literature to update the checklists that are central to this effort. Here we present topline results of our 2015 work with practices (changes in mean BP) and the updated M.A.P. checklists.

Improving Health Outcomes: Blood Pressure
The AMA is collaborating with the Johns Hopkins Armstrong Institute for Patient Safety and Quality and the Johns Hopkins Center to Eliminate Cardiovascular Health Disparities. We call this joint initiative “Improving Health Outcomes: Blood Pressure” or “IHO: BP.”

Our primary focus is to work with physician offices and health centers to address patients with uncontrolled hypertension.

Based on NHANES, 2003 – 2010, among the 35.8 million uncontrolled hypertensive patients:
- 89% have a usual source of health care
- 88% received medical care during the previous year, and
- 85% have health insurance.

IHO: BP Team and Prototyping Phase Participants

The M.A.P. Framework for Optimal Hypertension Control

- Measure blood pressure accurately
- Act rapidly to address high blood pressure readings
- Partner with patients, families and communities to promote self-management

The 2015 M.A.P. Checklists for Improving BP Control

Measure accurately

- When screening patients for high blood pressure:
  - Use a validated, automated device to measure blood pressure
  - Use the correct cuff size on a bare arm
  - Ensure patient is positioned correctly
  - If blood pressure is ≥140/90 mm Hg, obtain a confirmatory measurement:
    - Repeat screening steps above
    - Ensure patient has an empty bladder
    - Ensure patient has rested quietly for at least five minutes
    - Obtain the average of at least three BP measurements

Act rapidly

- If patient has blood pressure ≥140/90 mm Hg confirmed:
  - Use an evidence-based protocol to guide treatment
  - Re-assess patient every 2-4 weeks until BP is controlled
  - Whenever possible, prescribe single-pill combination therapy

Partner with patients, families and communities

- To empower a patient who has uncontrolled hypertension:
  - Engage patients using evidence-based communication strategies
  - Help patients accurately self-measure BP
  - Direct patients and families to resources and healthy lifestyles

Checklists from the Prototyping Phase have been updated based on learnings from this phase and as more evidence emerged. Most current version of checklists is shown above.

BP Control and Mean BP for Uncontrolled Patients,
September 2013 vs September 2014 (Prototyping Phase) – Preliminary Results

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<thead>
<tr>
<th>Site</th>
<th>Pre-Intervention BP Control Rate</th>
<th>Post-Intervention BP Control Rate</th>
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<tr>
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<td>18.9%</td>
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<tr>
<td>6</td>
<td>15.1%</td>
<td>21.0%</td>
</tr>
</tbody>
</table>

Mean BP change
SBP: 7.4 mmHg
DBP: 4.3 mmHg

Adaptive Change in Ambulatory Practice (ACAP) program
The Adaptive Change in Ambulatory Practice (ACAP) program is based on the Comprehensive Unit-Based Safety Program (CUSP), which hospital-based teams have successfully used to improve inpatient care around the globe. The ACAP program provides ambulatory teams with a framework for leveraging the experience and knowledge of all team members to improve outpatient care. Through these steps, the program is designed to build an evidence foundation for reducing defects and improving the reliability of care delivery in your practice or health center.

1. Improve Science Training: Healthcare teams need to understand the system in which they work to enable change in their clinical setting.
2. Identify Defects: A defect is anything that happens, clinically or operationally, that you don’t want to happen again. Your practice or health center can identify potential defects from a variety of information sources.
3. Engage Practice or Health Center Leadership: The partnership between your project’s system leader and other ACAP team members is crucial to the program’s success.
4. Learn from Defects: Once defects in care processes have been identified and prioritized, the ACAP team must learn from them and implement changes to address defects.
5. Use Tools to Improve: Often, ACAP teams find it easier to achieve their goals by using forms, checklists, new equipment and other tools to support their efforts and the work of clinicians and staff members caring directly for patients.

IHO: BP Spread Efforts

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