2014 Evidence-Based HTN Guideline:
Preliminary Data from AMGA’s Anceta Collaborative

February 2014
Patient Population

- Measure spec for MU/PD generally follows NQF 0018 (used for HEDIS, PQRS, and MU)

- 1.6 million patients with hypertension, across 24 medical groups
  - E&M visit 10/1/2012 – 9/30/2013
  - No exclusions by specialty seen
  - No exclusion for urgent care (exclude BPs from ER, observation, and inpatient settings)

- Diagnosis of essential hypertension by 3/31/2013 (first 6 months of 12-month measurement period)
  - Dx code 401.XX on claim for E&M visit, or
  - EHR problem list

- Exclude patients with ESRD, who were pregnant, or were admitted to a non-acute inpatient setting

- Use last ambulatory, in-office BP during reporting period
  - If there are multiple readings on a single day, take the lowest systolic reading and the lowest diastolic reading
  - Exclude BP readings taken prior to the Dx of HTN (considered missing BP)
  - Exclude home BP and ambulatory BP monitoring
  - Patients with no BP measurement during the reporting period are considered not in control (treated here as missing)
Age Distribution of Patients with Hypertension

- Combined data for 24 medical groups, 1.6 million active patients with hypertension
- Overall, 61% of patients with hypertension are ≥ 60 years old (100% − 39% = 61%)
Age Distribution by Medical Group

- Each column represents one medical group participating in AMGA’s Anceta Collaborative
- Proportion of patients with hypertension who are ≥ 60 years old ranges from 56% to 69%
1. First we identify patients with HTN who also have diabetes (33%)

2. We then find patients with chronic kidney disease (13%)

3. 7% of patients with HTN have both diabetes and CKD

4. The remaining 61% of patients (who do not have either diabetes or CKD) are distinguished by age: 18–59 and 60–85
Proportion of patients with hypertension who do not have diabetes or CKD and are \( \geq 60 \) years old is 34% overall but ranges from 29% to 43% by group.
2014 Evidence-Based Guideline: Patient Categories

Age 60–85
- No Diabetes or CKD: 34%

Age 18–59
- CKD (without Diabetes): 6%
- Diabetes and CKD: 27%
- Diabetes (without CKD): 25%
Begin with the 33% of patients with HTN who also have diabetes:
Begin with the 33% of patients with HTN who also have diabetes:

- 34% Out of control (≥ 140/90)
- 27% In control (< 140/90)
- 6% Missing

HTN status, as percentage of patients with HTN and diabetes
Overall, 4.0% more patients with HTN would be viewed as in control under the 2014 Evidence-Based Guideline; range across medical groups: 3% – 6%
Note that BP is not recorded for some patients with hypertension who have E&M visits.

- Practice sites that are measuring BP but not recording it in the EHR, typically because a new EHR is being implemented, and we are obtaining data only from the new system, which is not yet used in all of a medical group’s sites of care.
  - We will work with the affected medical groups to identify this situation, and we will remove these patients from the denominator.
- Practice sites that are not routinely measuring BP, typically dermatology, ophthalmology, urology, orthopedics, ENT, and podiatry.
  - Plank 8 for Measure Up/Pressure Down emphasizes a key learning from AMGA’s hypertension collaborative: in groups who achieved outstanding control, all specialties intervened with patients not in control. Moreover, NQF 0018 is includes all ambulatory sites of care, with no exclusion by specialty. Therefore, we will continue to consider patients out of control if they have a qualifying E&M visit with a specialty practice (which is using the EHR) but have no qualifying BP recorded during the measurement period, in keeping with the definition of NQF 0018.

The following supplemental slides show:

- Distributions of actual BP readings
- Effect of ADA recommendation that patients with hypertension and diabetes be controlled to < 140/80 mm Hg
  - ADA recommends, “Lower systolic targets, such as < 130 mmHg, may be appropriate for certain individuals, such as younger patients, if it can be achieved without undue treatment burden.” Evidence grade C, “Supportive evidence from poorly controlled or uncontrolled studies.”
Among patients who are ≥ 60 years old and do not have CKD or diabetes, 14% have SBP between 140 and 149 (blue). 12% also have DBP < 90 and thus would be considered In Control under the 2014 Evidence-Based Guideline but Out of Control by a strict 140/90 threshold.

When BP is taken manually, there is a tendency to round to a multiple of 10 mm Hg. These graphs include 540,000 patients who are ≥ 60 years old and do not have CKD or diabetes, across 24 medical groups. Rounding varies widely by group, site of care, and individual caregiver. Most of the odd-numbered values are from sites using automated sphygmomanometers.
Cumulative Distribution of BP Readings by Age

- Rounding to multiples of 10 mm Hg makes it difficult to compare conventional distributions of BP readings, but cumulative distributions show differences in BP readings by age group.
- Note that these data include all patients with HTN. Those with diabetes and CKD are not broken out separately.

How to read this graph:
Age 18–59: 83% of pts. have diastolic BP ≤ 89

Reference line at 89 mm Hg
In general, diastolic BP declines with age, so 96% of patients aged 80–85 have DBP ≤ 89 mm Hg, while only 83% of patients age 18–59 have DBP ≤ 89.

Systolic BP generally increases with age, although less dramatically. See the right-hand graph.
2014 Evidence-Based Guideline: Patient Categories

- Age 60–85
  - No Diabetes or CKD: 34%
  - CKD (without Diabetes): 27%
  - Diabetes and CKD: 6%
  - Diabetes (without CKD): 7%

- Age 18–59
  - No Diabetes or CKD: 25%
  - CKD (without Diabetes): 34%
  - Diabetes and CKD: 27%
  - Diabetes (without CKD): 16%
Considering the 33% of patients with HTN who also have diabetes:

- Out of control (≥ 140/90): 6%
- Out of control ADA (≥ 140/80): 8%
- In control (< 140/90): 18%

HTN status, as percentage of all patients with HTN.
Considering the 33% of patients with HTN who also have diabetes:

- Out of control (≥ 140/90): 25%
- Out of control ADA (≥ 140/80): 18%
- In control (< 140/90): 55%
Overall, 5.7% more patients with HTN would be viewed as out of control under the ADA Guideline (< 140/80); range across medical groups: 4% – 8%