

# The Impact of Hypertension in Kentucky. How Hospitals/Health Systems Can Help.

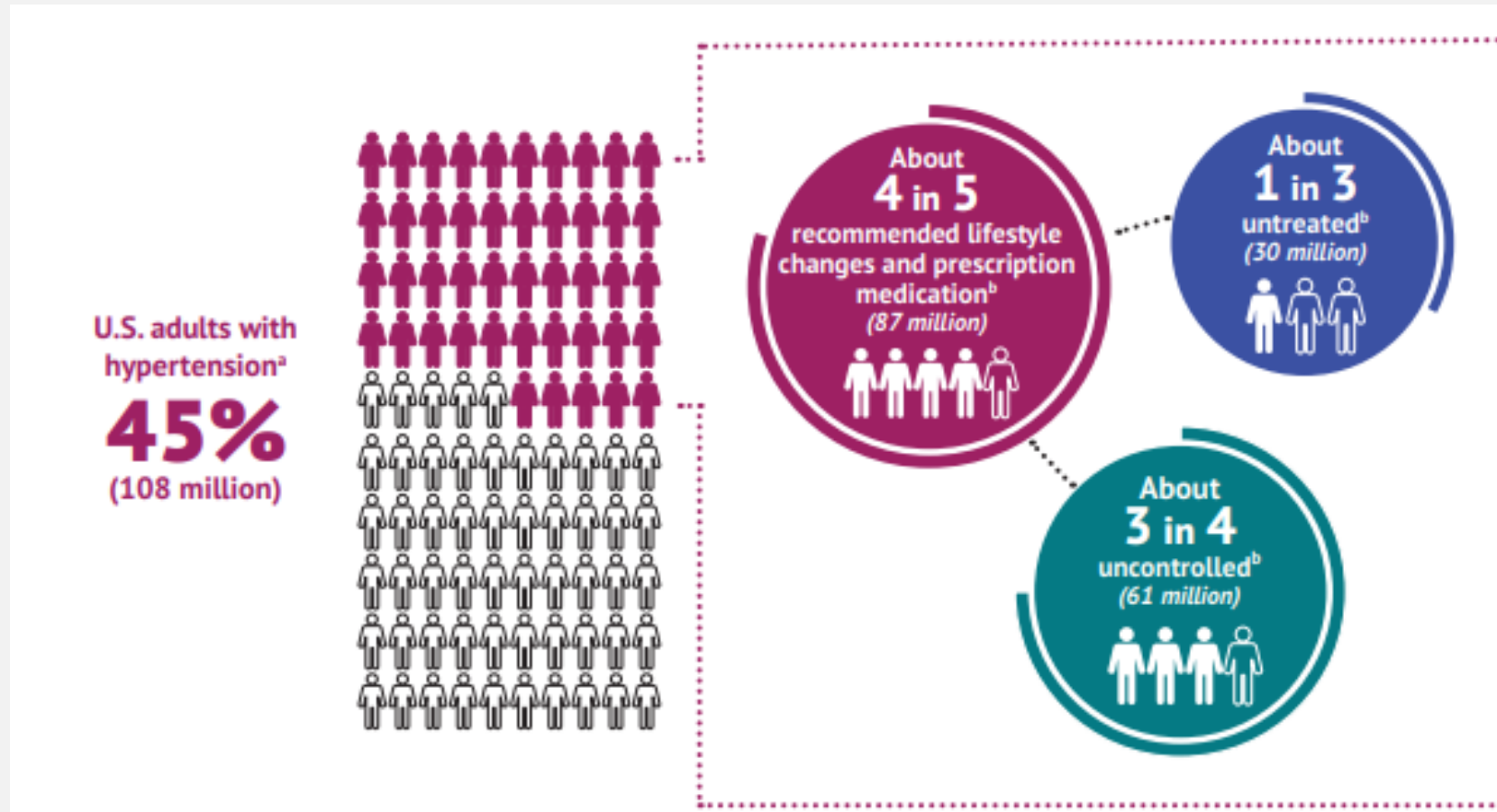
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Executive Director, Patient Care Experience  
Regional Brain Institute

# Disclosures:

## No Financial Disclosures

- Steering Committee, Kentucky Heart Disease and Stroke Prevention Taskforce
- Chair, Stroke Encounter Quality Improvement Project

# Hypertension: National Prevalence, Control, and Treatment

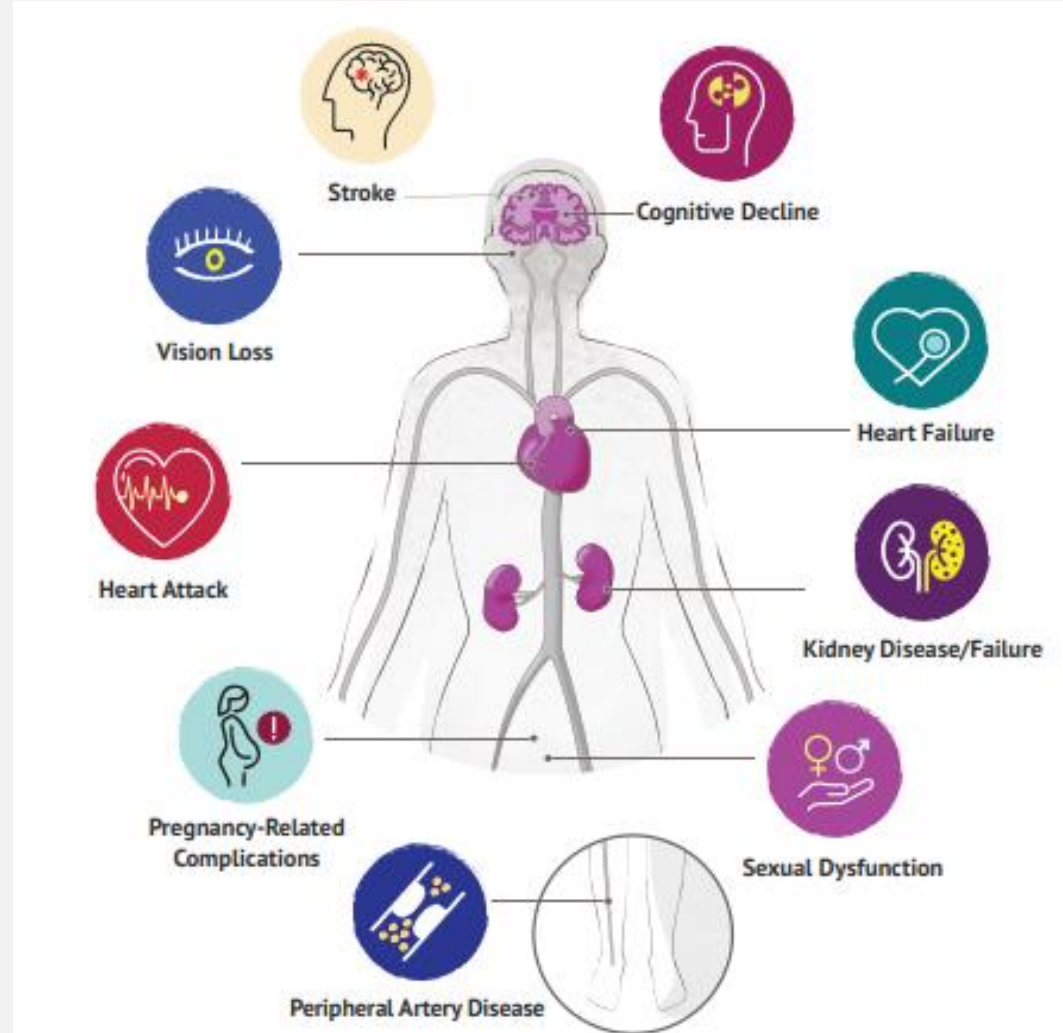


Graphic: 2020 Surgeon General's Call to Action to Control Hypertension

Centers for Disease Control and Prevention (CDC). Hypertension Cascade: Hypertension Prevalence, Treatment and Control Estimates Among US Adults Aged 18 Years and Older Applying the Criteria From the American College of Cardiology and American Heart Association's 2017 Hypertension Guideline—NHANES 2013–2016. Atlanta, GA: US Department of Health and Human Services; 2019

# “Silent Killer”

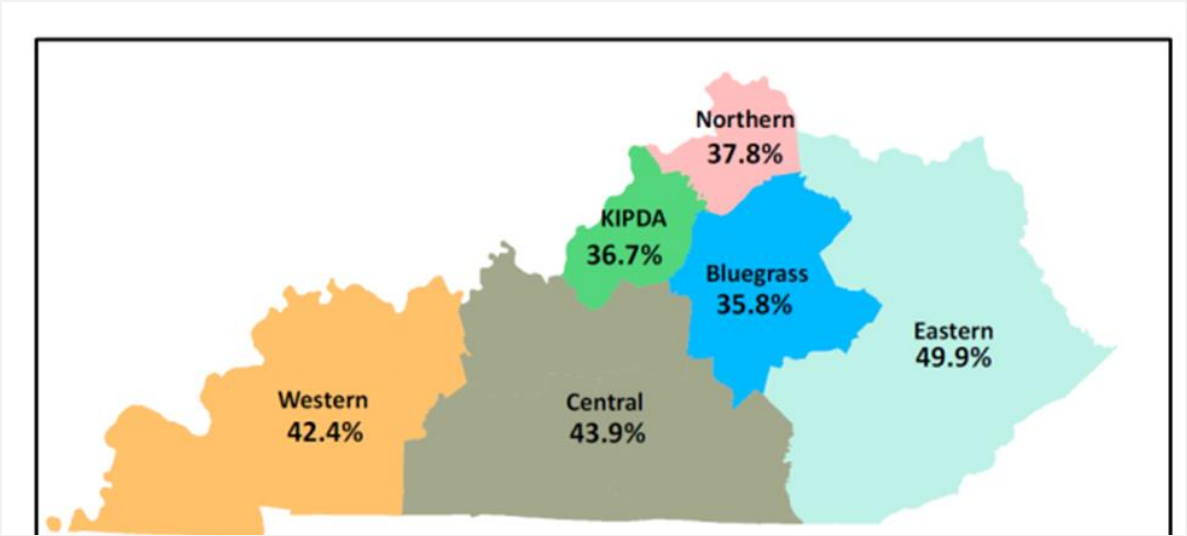
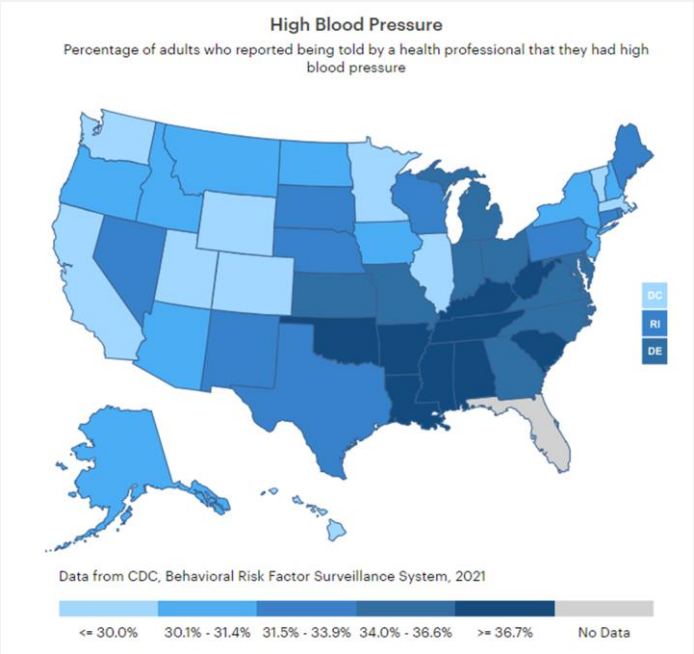
- Total health care cost \$131-198 billion annually
- By 2035 expected to exceed estimated \$220 billion annually
- Impacts
  - Quality of life
  - Associated with poor health outcomes
  - Lost productivity; Absenteeism
- Health Equity & SDOH
  - Patient
  - Family and support systems
  - Health care providers/health systems
    - Implicit bias
  - Local, state, and national health policies





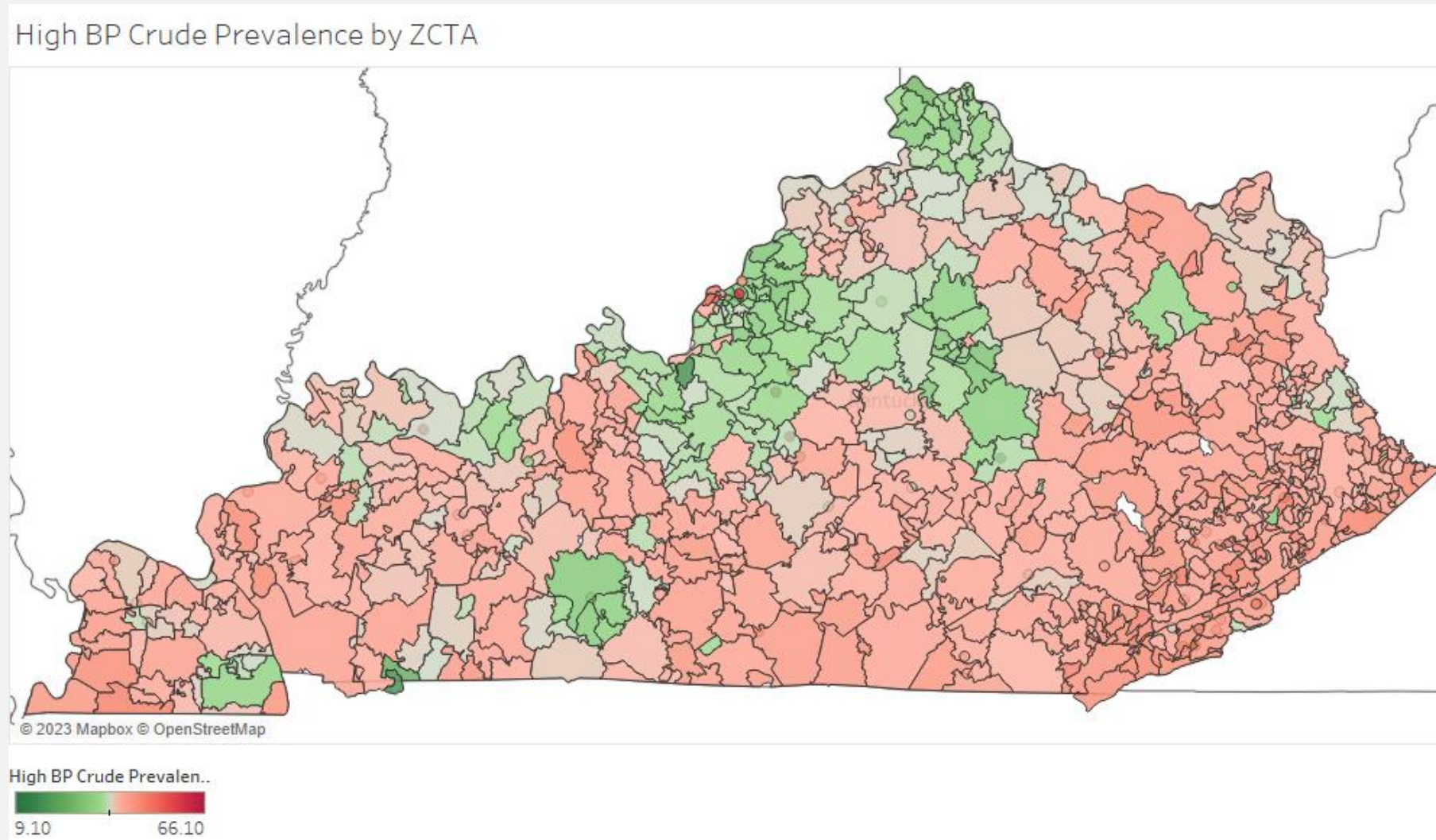
# Hypertension Demographics: Kentucky

Prevalence of High Blood Pressure Among Kentucky Adults 2021 BRFSS		
Characteristics	%	95% CI
Overall	39.9	38.2 - 41.7
Sex		
Male	42.3	39.8 - 44.9
Female	37.7	35.2 - 40.1
Race Ethnicity		
White (non-Hispanic)	39.8	38.0 - 41.6
Black (non-Hispanic)	50	42.4 - 57.6
Multiracial (non-Hispanic)	37.8	20.6 - 55.0
Hispanic	25.2	14.7 - 35.8
Age (years)		
18-24	12.8	8.8 - 16.8
25-34	20.6	16.6 - 24.7
35-44	29.4	25.1 - 33.7
45-54	43.8	39.2 - 48.3
55-64	52	47.9 - 56
65+	64.1	61 - 67.2
Education		
Less than High School	52.3	45.9 - 58.8
High School or G.E.D.	43.2	40.1 - 46.4
Some post High School	37.5	34.4 - 40.7
College graduate	31.4	28.6 - 34.1
Income		
< \$15,000	57.6	50.5 - 64.7
\$15,000 - \$24,999	52.2	46.5 - 58
\$25,000 - \$34,999	42.2	36.7 - 47.7
\$35,000 - \$49,999	40.6	35.5 - 45.7
\$50,000 - \$99,999	35.1	31.6 - 38.7
\$100,000 - \$199,999	29.8	25.4 - 34.3
\$200,000+	20.1	12.1 - 28
* CI = confidence interval		



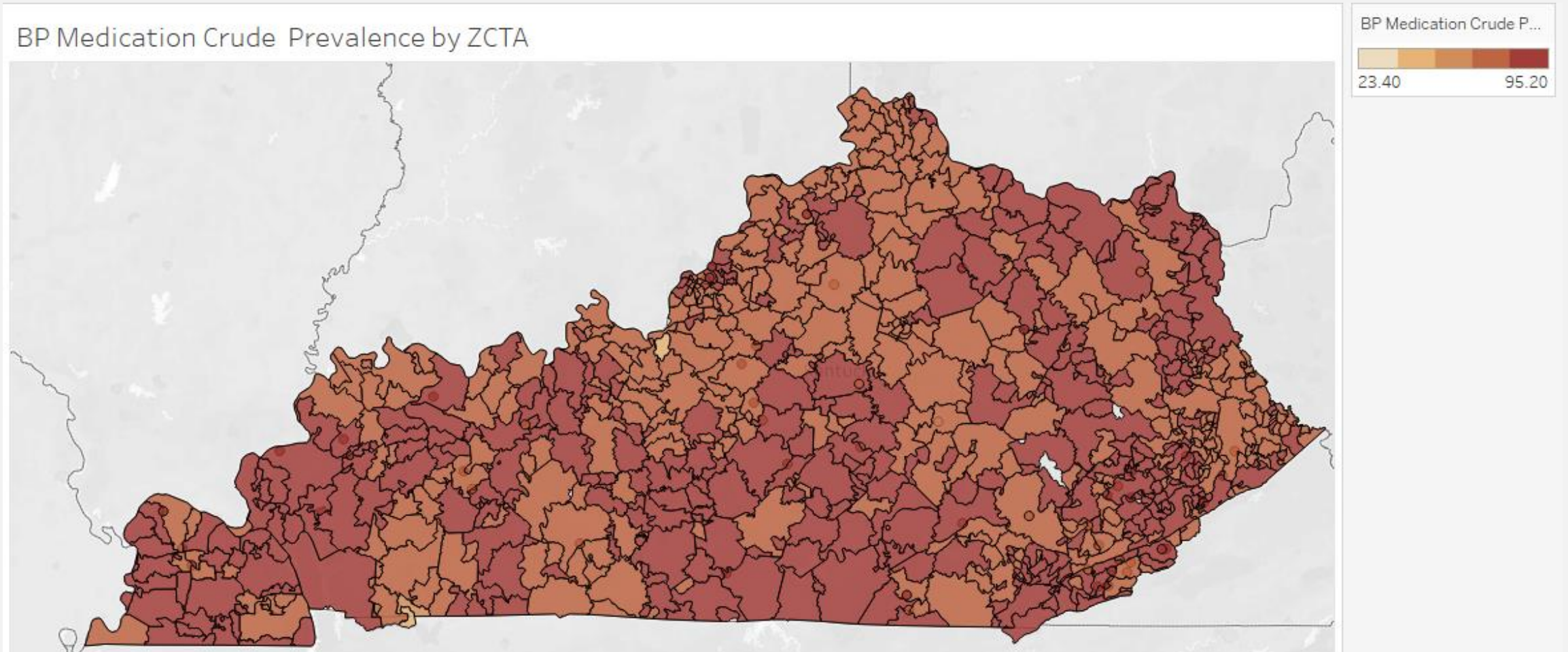
Source: CDC BRFSS Prevalence and Trends Data. Accessed at [https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH\\_BRFSS.ExploreByLocation&rdProcessAction=&SaveFileGenerated=1&irbLocationType=States&isLocation=21&isState=&isCounty=&isClass=CLASS10&isTopic=TOPIC31&isYear=2021&hidLocationType=States&hidLocation=21&hidClass=CLASS10&hidTopic=TOPIC31&hidTopicName=High+Blood+Pressure&hidYear=2021&irbShowFootnotes=Show&rdICL-icIndicators=\\_RFHYPE6&icIndicators\\_rdExpandedCollapsedHistory=&icIndicators=\\_RFHYPE6&hidPreviouslySelectedIndicators=&DashboardColumnCount=2&rdShowElementHistory=divTopicUpdating%3dHide%2cisITopic%3dShow%2cdivYearUpdating%3dHide%2cisYear%3dShow%2c&rdScrollX=0&rdScrollY=233&rdRnd=50624](https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH_BRFSS.ExploreByLocation&rdProcessAction=&SaveFileGenerated=1&irbLocationType=States&isLocation=21&isState=&isCounty=&isClass=CLASS10&isTopic=TOPIC31&isYear=2021&hidLocationType=States&hidLocation=21&hidClass=CLASS10&hidTopic=TOPIC31&hidTopicName=High+Blood+Pressure&hidYear=2021&irbShowFootnotes=Show&rdICL-icIndicators=_RFHYPE6&icIndicators_rdExpandedCollapsedHistory=&icIndicators=_RFHYPE6&hidPreviouslySelectedIndicators=&DashboardColumnCount=2&rdShowElementHistory=divTopicUpdating%3dHide%2cisITopic%3dShow%2cdivYearUpdating%3dHide%2cisYear%3dShow%2c&rdScrollX=0&rdScrollY=233&rdRnd=50624) on Feb 2, 2024.  
He et al., AM J Prev Med. 2024

# High BP Crude Prevalence by ZCTA



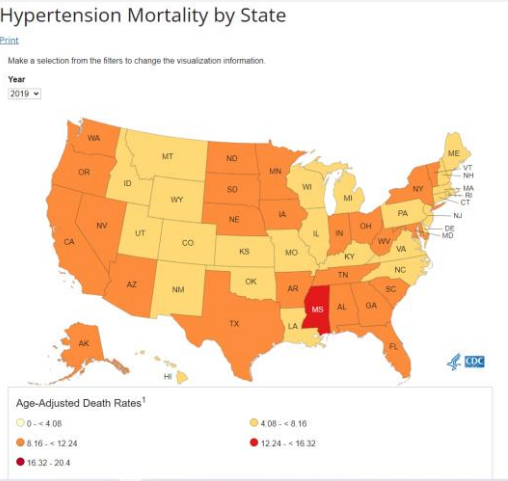


# BP Medication Crude Prevalence by ZCTA

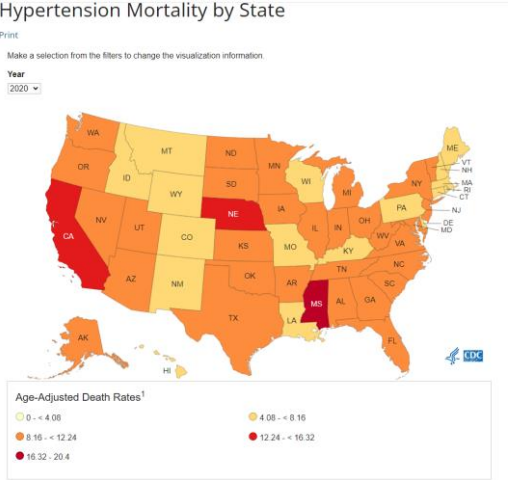


# Hypertension Mortality By State

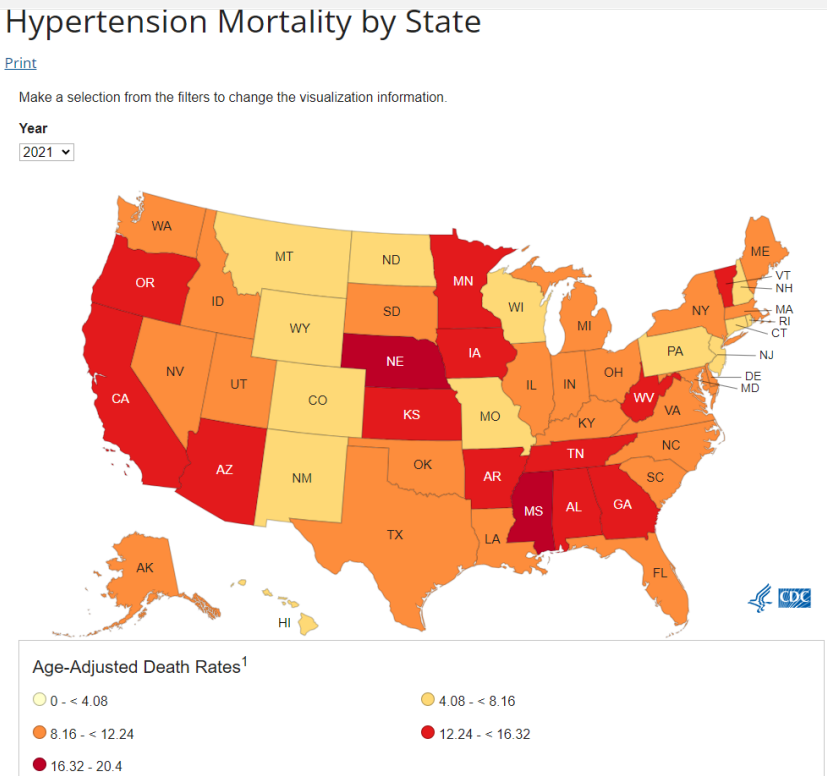
2019



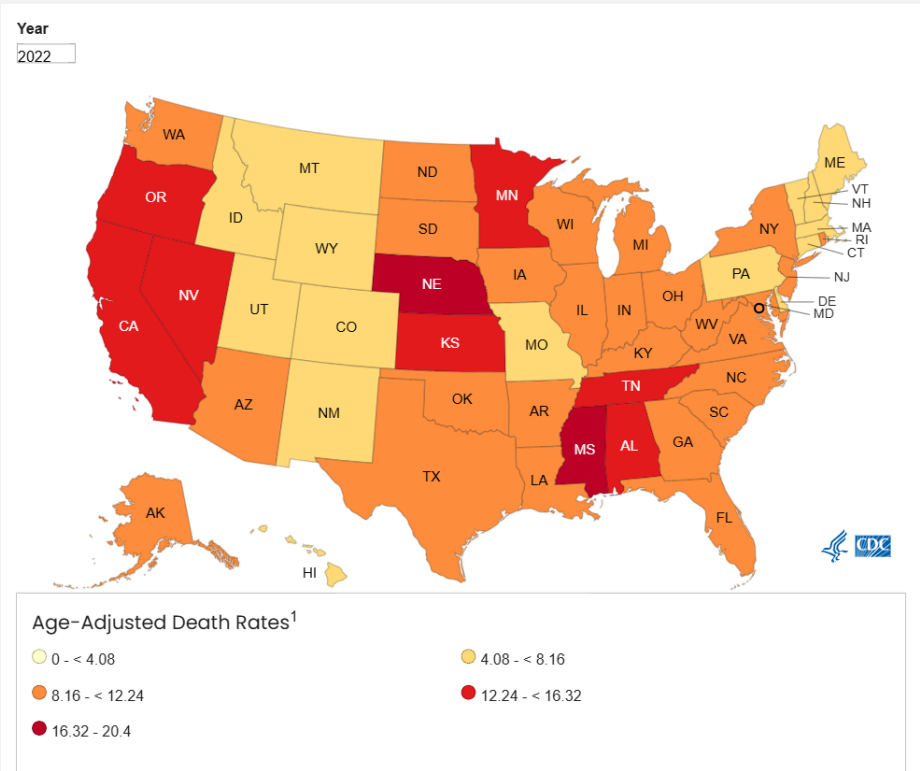
2020



2021



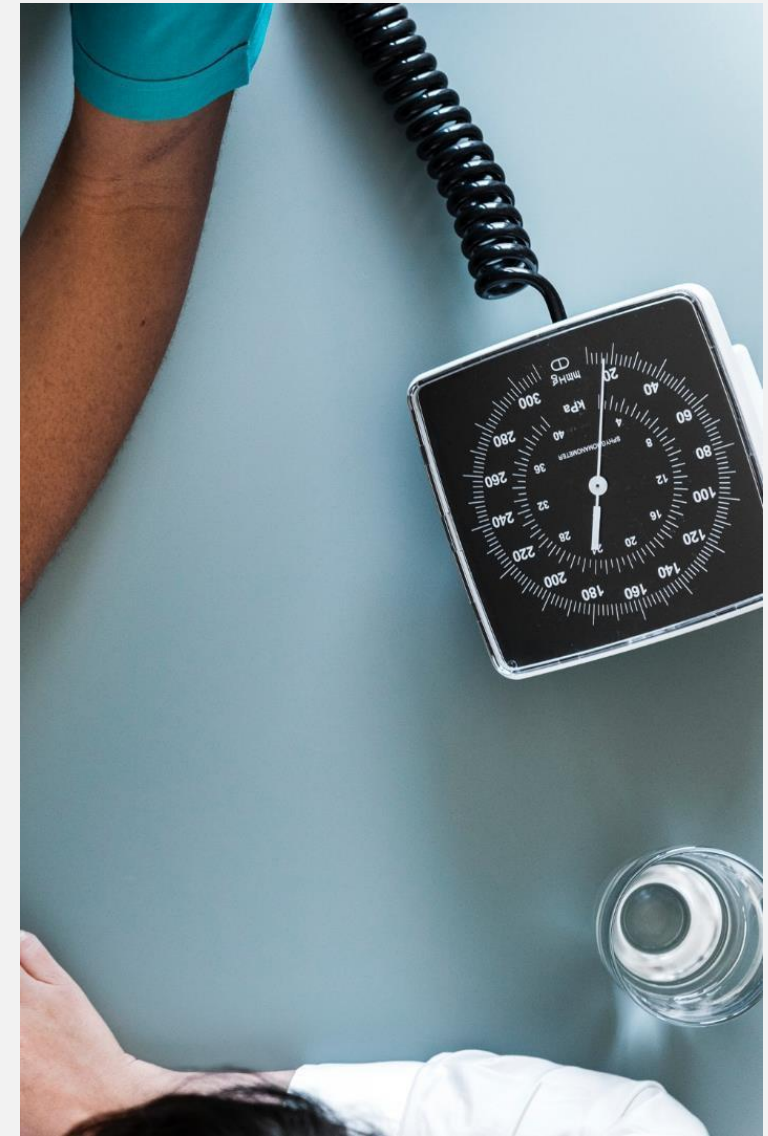
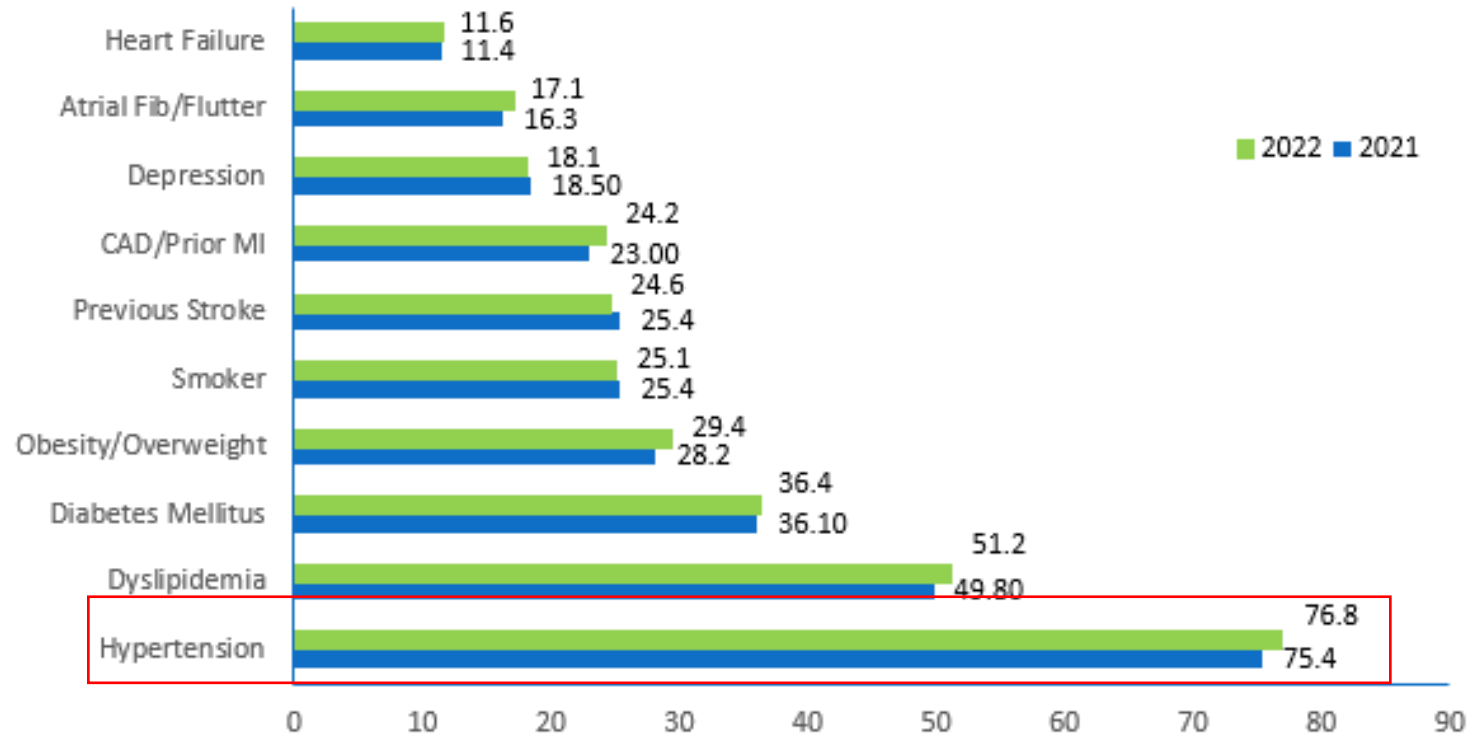
2022





# Hypertension in Kentucky Stroke Patients

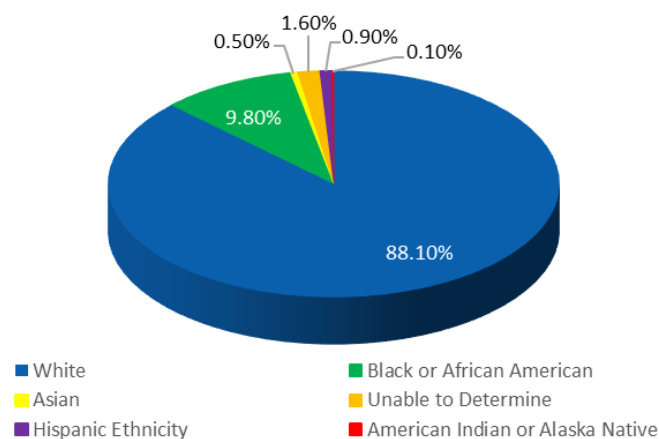
Most common stroke risk factors of SEQIP patients 2021-2022



# Stroke in Kentucky - 2022

- #5 cause of death in Kentucky
- > 15,000 admissions
- Total inpatient hospital charges > \$ 937 Million

SEQIP Race 2022



SEQIP Age 2022

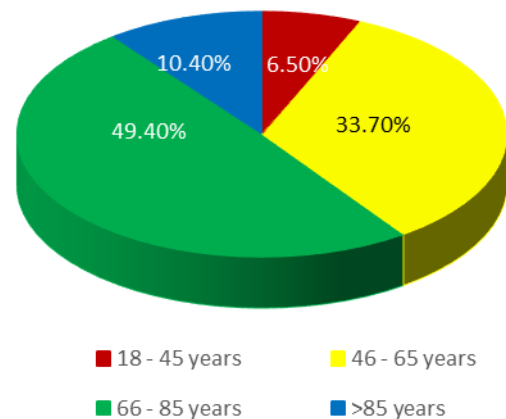
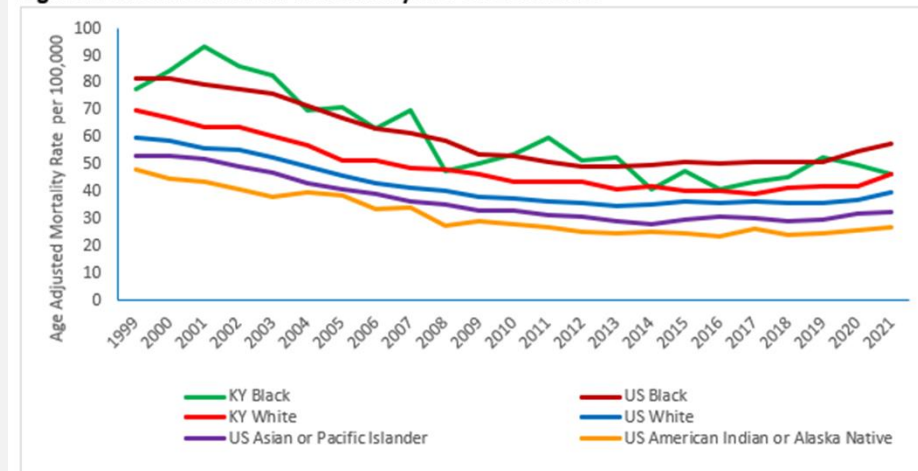
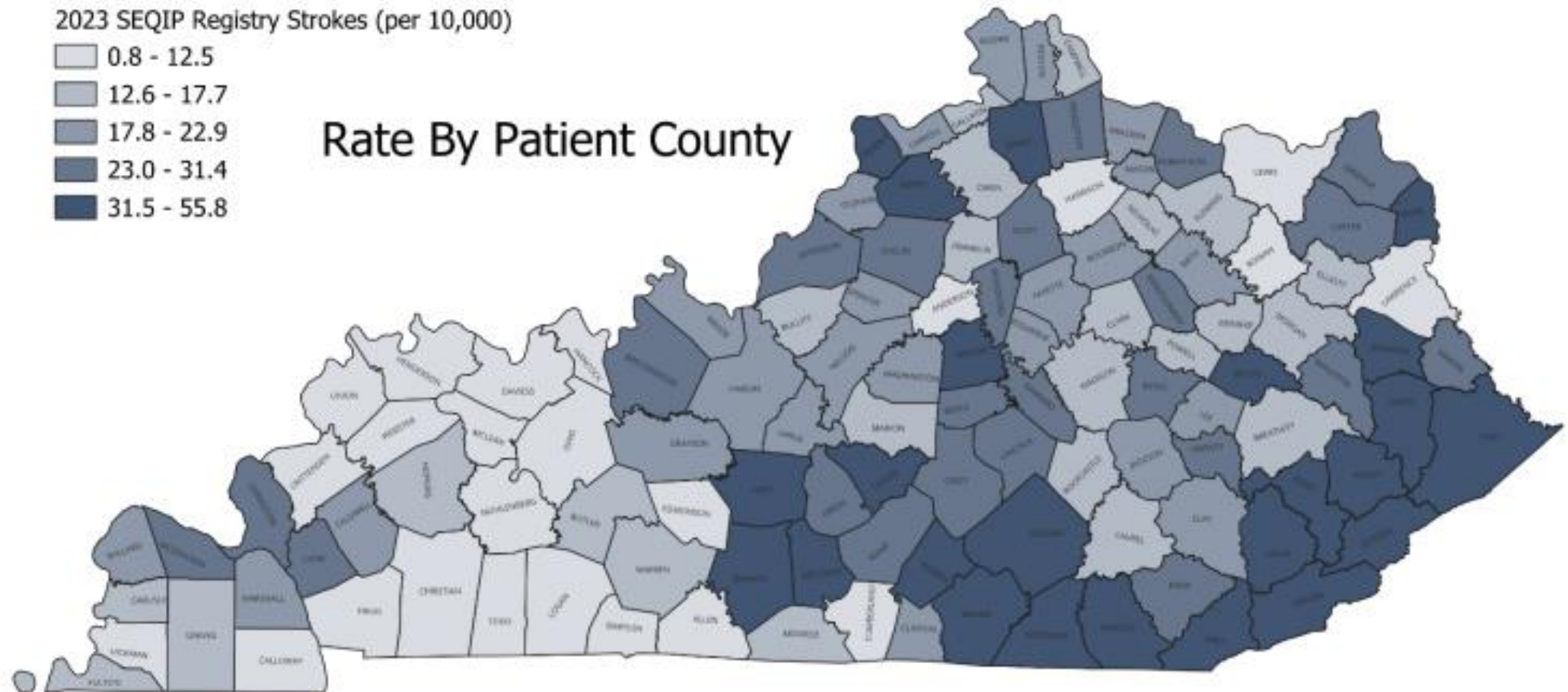


Figure 1: Stroke death rate in Kentucky and US 1999-2021



Source: Centers for Disease Control and Prevention. CDC Wonder. <http://wonder.cdc.gov/>. 2023.<sup>8</sup> KY Asian and KY American Indian was either not reported due to small numbers for confidentiality reasons or rates were statistically unreliable when the numerator was <20.

# KY Stroke Mortality Rate 2023

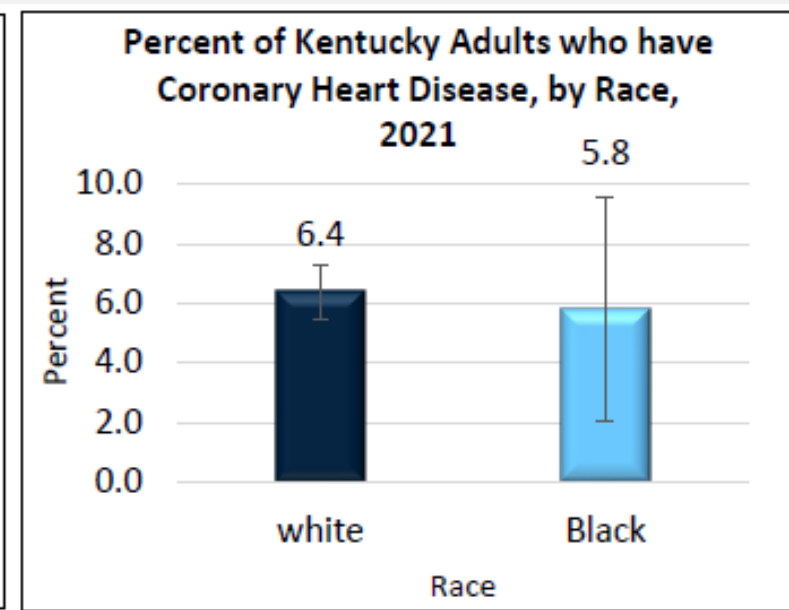
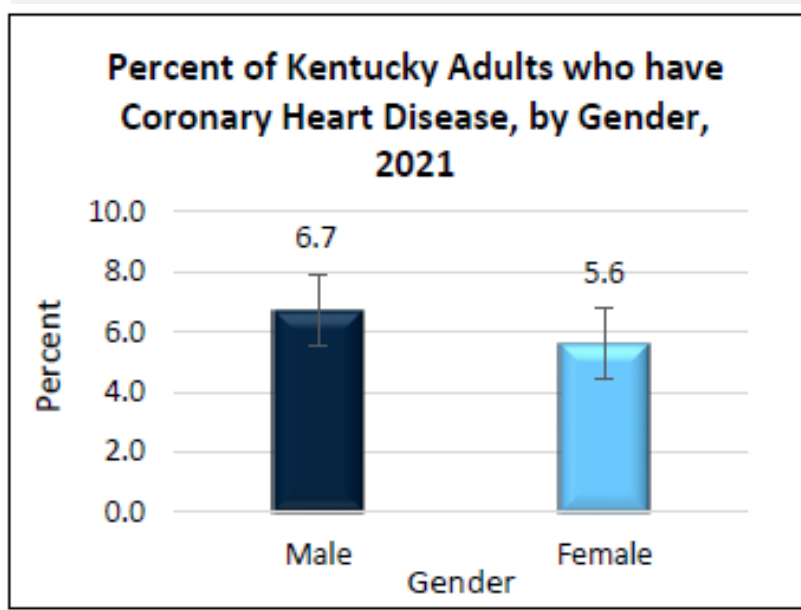
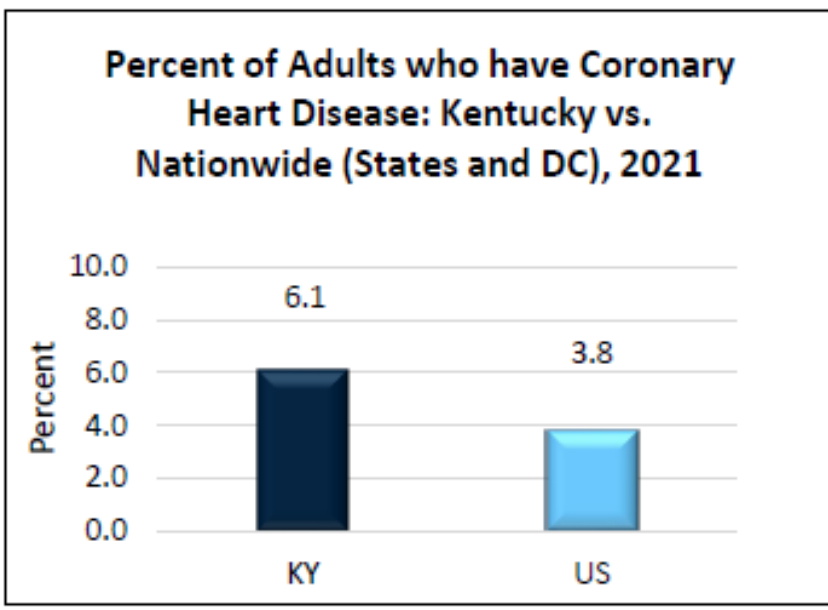




# Heart Disease in Kentucky - 2022

#1 Cause of death in Kentucky

Total inpatient hospital charges >\$4.5 Billion



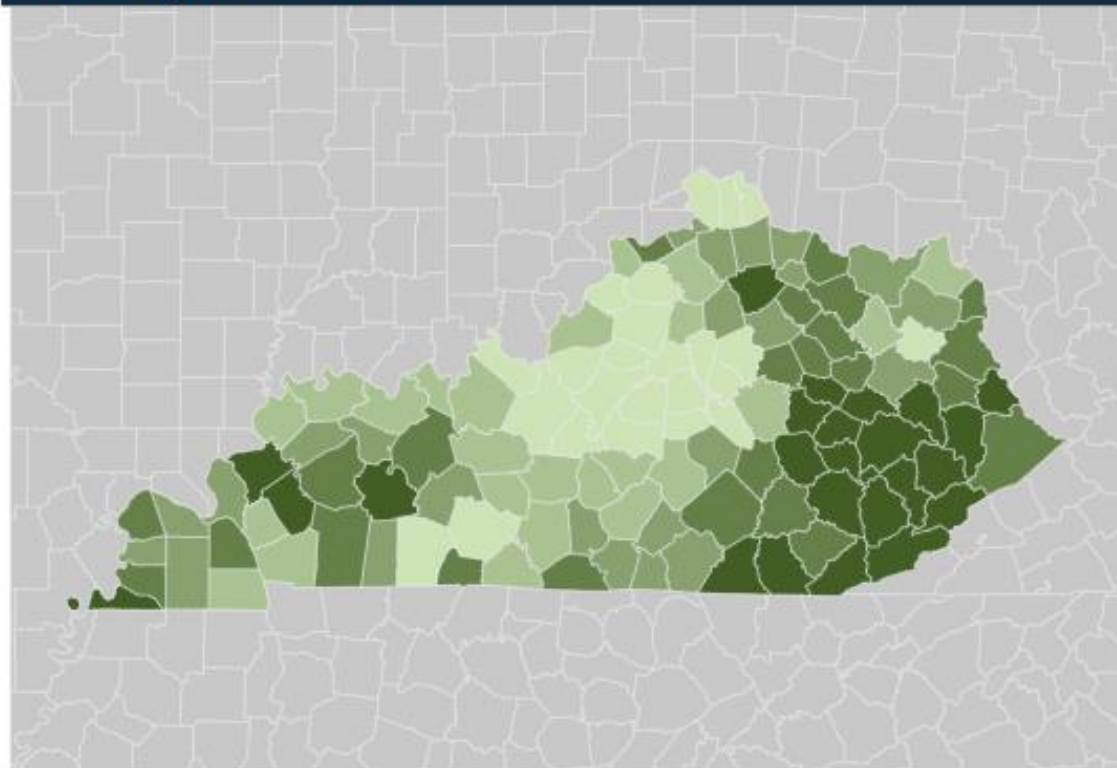
Kentucky Department for Public Health (KDPH) and the Centers for Disease Control and Prevention (CDC). Kentucky Behavioral Risk Factor Survey (KyBRFS) Data. Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky Department for Public Health, [2021 data].(S. Kanotra, J. Boulay, personal communication, Aug 8, 2023).

Kentucky Hospital Inpatient Claims 2022; Kentucky Cabinet for Health and Family Services, Office of Data Analytics

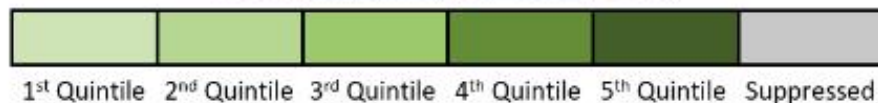
# Heart Disease Death Rate 2019, All Races, All Genders 35-64 years

35-64 years

State Map of Death Rate

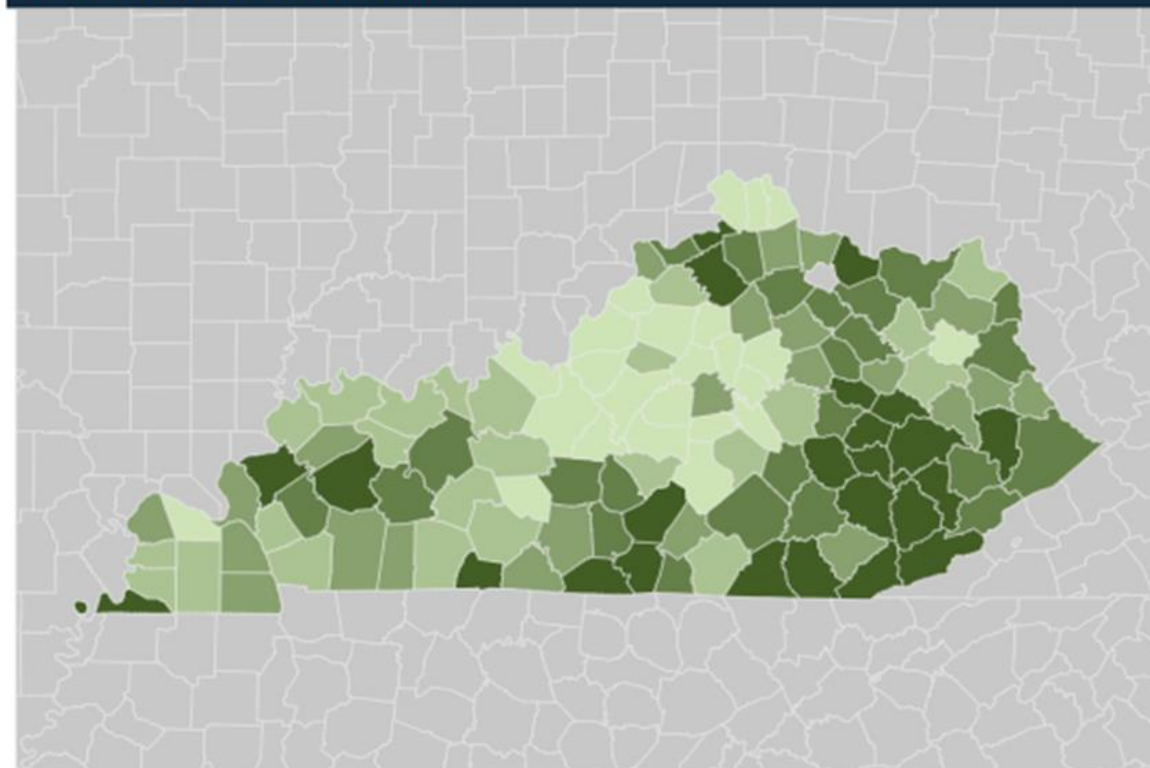


Death Rate (Per 100,000)

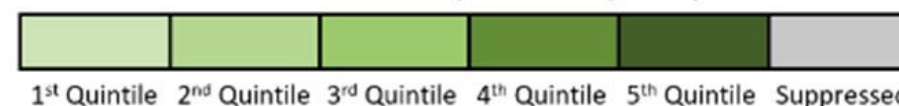


65+ years

State Map of Death Rate



Death Rate (Per 100,000)

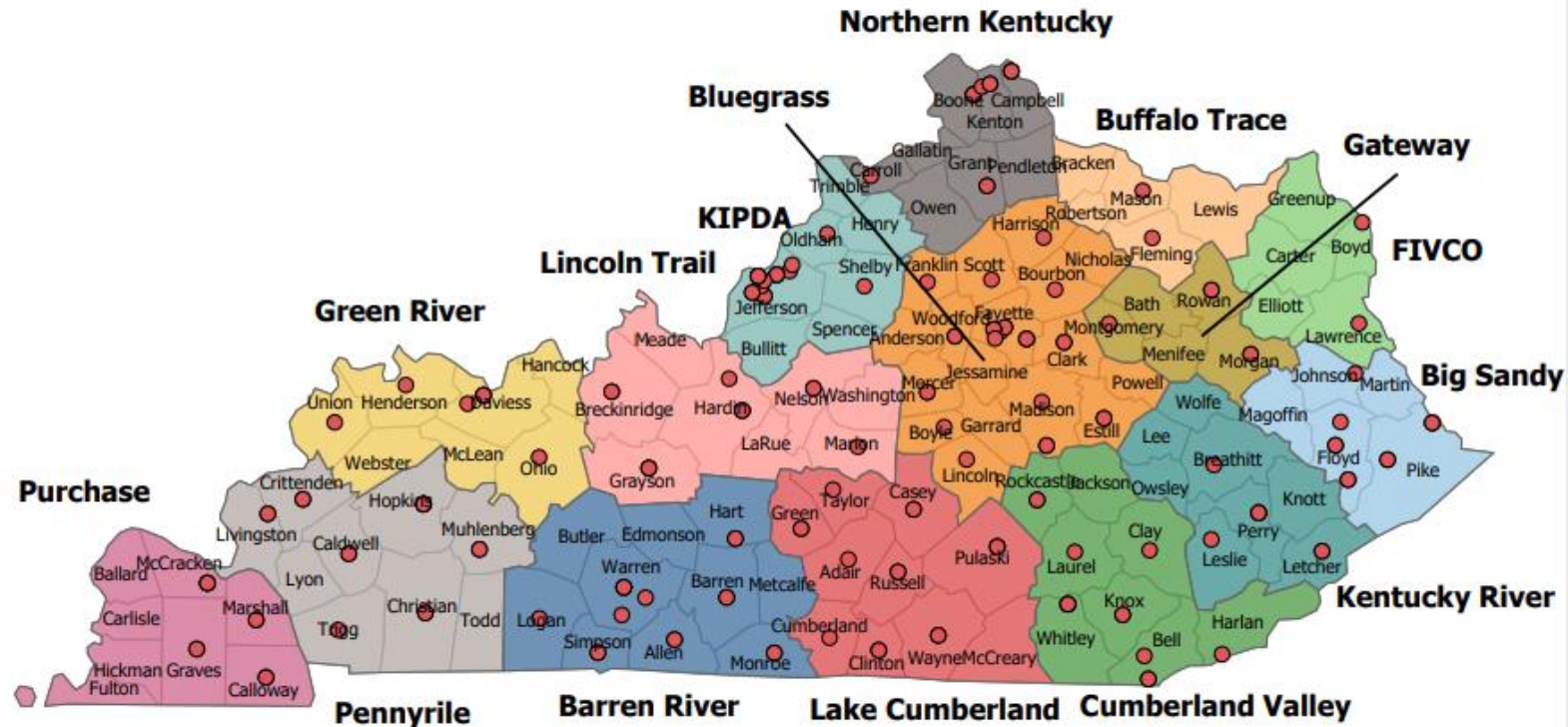


# Inpatient Impact



# Hospitals/Health Systems as Stakeholders

## Kentucky Hospitals with Inpatient Discharges 2023



\*Note: Facilities shown in geographic center of address zip code. Multiple facilities in close proximity (same zip code) may be designated with only one marker.

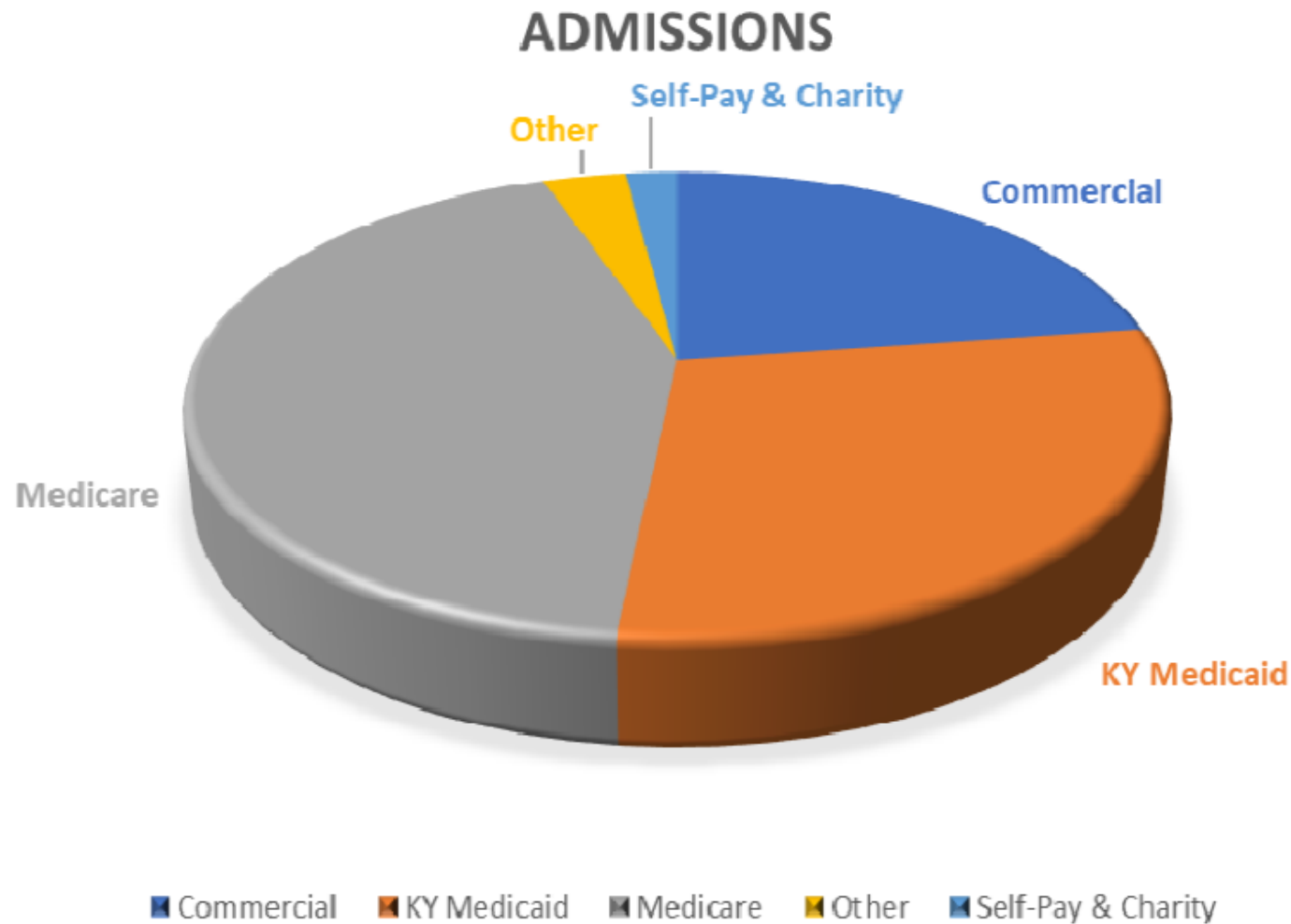
**Cabinet for Health & Family Services  
Office of Data Analytics**

# Kentucky Payor Source 2023

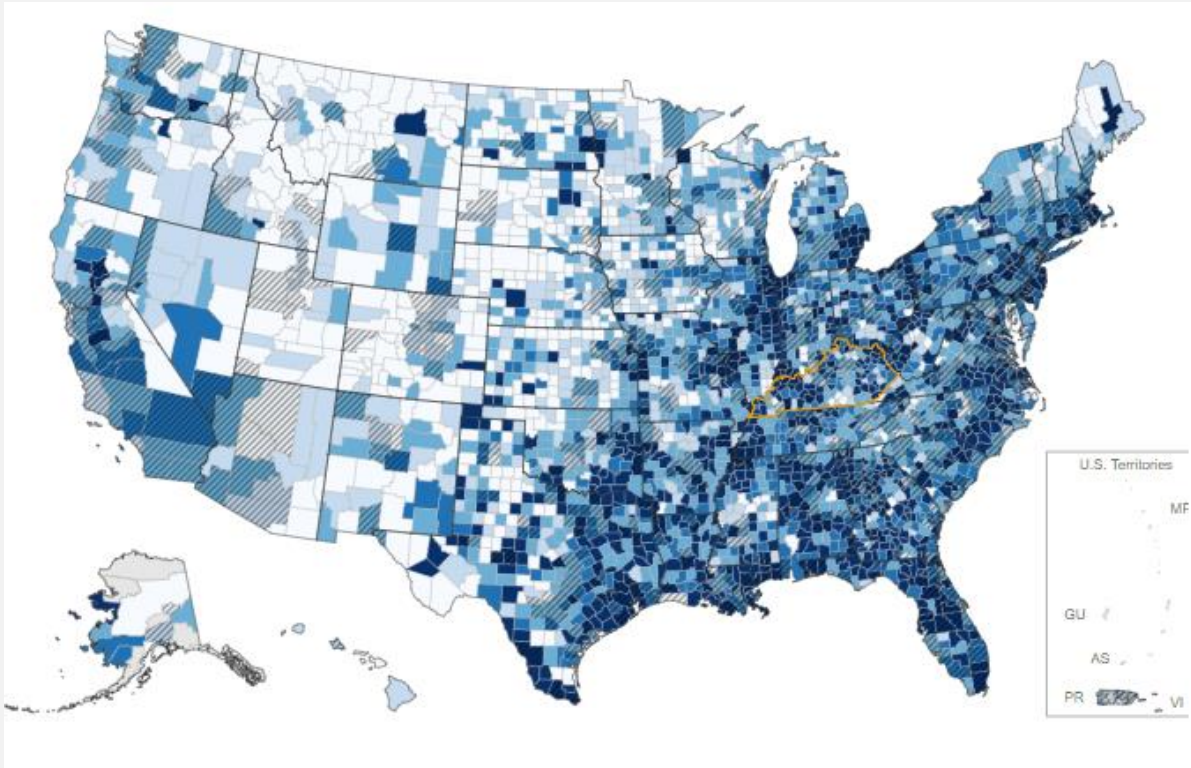
## 2023 ANNUAL ADMINISTRATIVE CLAIMS DATA REPORT - Inpatient Hospitalizations

Chart 2 - Discharges by Primary Payor

(Source: Kentucky Inpatient Discharge Claims)



# Hypertension Hospitalizations 2022 - Medicare Beneficiaries





## 2023 ANNUAL ADMINISTRATIVE CLAIMS DATA REPORT

Table 2.00 - Inpatient Hospital Discharges - Leading 25 MS DRGs

(Source: Kentucky Inpatient Discharge Claims)

### All Kentucky Hospitals

MS DRG	Discharges	% of Total	Avg LOS	Avg Charge	Avg Age
885 - PSYCHOSES	32,337	5.9%	8.00	\$21,475.88	32.63
871 - SEPTICEMIA W/O MV 96+ HOURS W MCC	28,605	5.2%	6.00	\$62,881.71	66.94
795 - NORMAL NEWBORN	27,409	5.0%	1.00	\$5,243.74	0.00
807 - VAGINAL DELIVERY W/O STERILIZATION WO/CC/MCC	20,370	3.7%	2.00	\$15,174.74	27.12
291 - HEART FAILURE & SHOCK W MCC	14,278	2.6%	5.00	\$40,648.65	71.96
794 - NEONATE W OTHER SIGNIFICANT PROBLEMS	12,868	2.4%	2.00	\$8,856.57	0.00
189 - PULMONARY EDEMA & RESPIRATORY FAILURE	9,873	1.8%	11.00	\$62,286.53	54.73
897 - ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W/O MCC	9,543	1.7%	6.00	\$17,925.77	42.33
193 - SIMPLE PNEUMONIA & PLEURISY W MCC	8,795	1.6%	4.00	\$41,100.29	67.46
806 - VAGINAL DELIVERY W/O STERILIZATION W/CC	8,109	1.5%	2.00	\$16,478.83	27.57
788 - CESAREAN SECTION WO/STERILIZATION WO/CC/MCC	7,308	1.3%	2.00	\$27,675.31	28.10
177 - RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC	7,107	1.3%	6.00	\$53,083.67	71.37
872 - SEPTICEMIA W/O MV 96+ HOURS W/O MCC	6,766	1.2%	4.00	\$33,522.03	58.62
853 - INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W MCC	5,190	0.9%	13.00	\$161,557.43	61.67
392 - ESOPHAGITIS GASTROENT & MISC DIGEST DISORDERS W/O MCC	5,190	0.9%	3.00	\$26,009.29	55.83
787 - CESAREAN SECTION WO/STERILIZATION W/CC	5,107	0.9%	3.00	\$29,754.24	28.92
683 - RENAL FAILURE W CC	4,627	0.8%	3.00	\$29,641.93	67.34
247 - PERC CARDIOVASC PROC W DRUG-ELUTING STENT W/O MCC	4,619	0.8%	2.00	\$108,424.42	63.35
280 - ACUTE MYOCARDIAL INFARCTION DISCHARGED ALIVE W MCC	4,533	0.8%	5.00	\$54,829.74	70.28
190 - CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC	4,447	0.8%	4.00	\$34,684.30	68.23
690 - KIDNEY & URINARY TRACT INFECTIONS W/O MCC	4,165	0.8%	3.00	\$25,945.91	67.66
641 - NUTRITIONAL & MISC METABOLIC DISORDERS W/O MCC	3,958	0.7%	3.00	\$24,565.52	58.55
065 - INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC	3,933	0.7%	4.00	\$47,938.59	69.23
682 - RENAL FAILURE W MCC	3,909	0.7%	6.00	\$49,883.21	70.14
603 - CELLULITIS W/O MCC	3,764	0.7%	3.00	\$25,809.93	55.20
All Others	299,922	54.9%	5.75	\$87,058.52	59.76
<b>Statewide</b>	<b>546,732</b>	<b>100.00%</b>	<b>5.94</b>	<b>\$91,736.59</b>	<b>57.33</b>

### 8/25 MS DRGs

- Pregnancy
- Heart Disease
- Stroke
- Kidney Disease

# American Hospital Association Quality Indicators Related to Hypertension

Prevention Quality Indicators (PQIs)

Inpatient Quality Indicators (IPIs)

Patient Safety Indicators (PSIs)



Hypertension Admission Rate – PQI 07

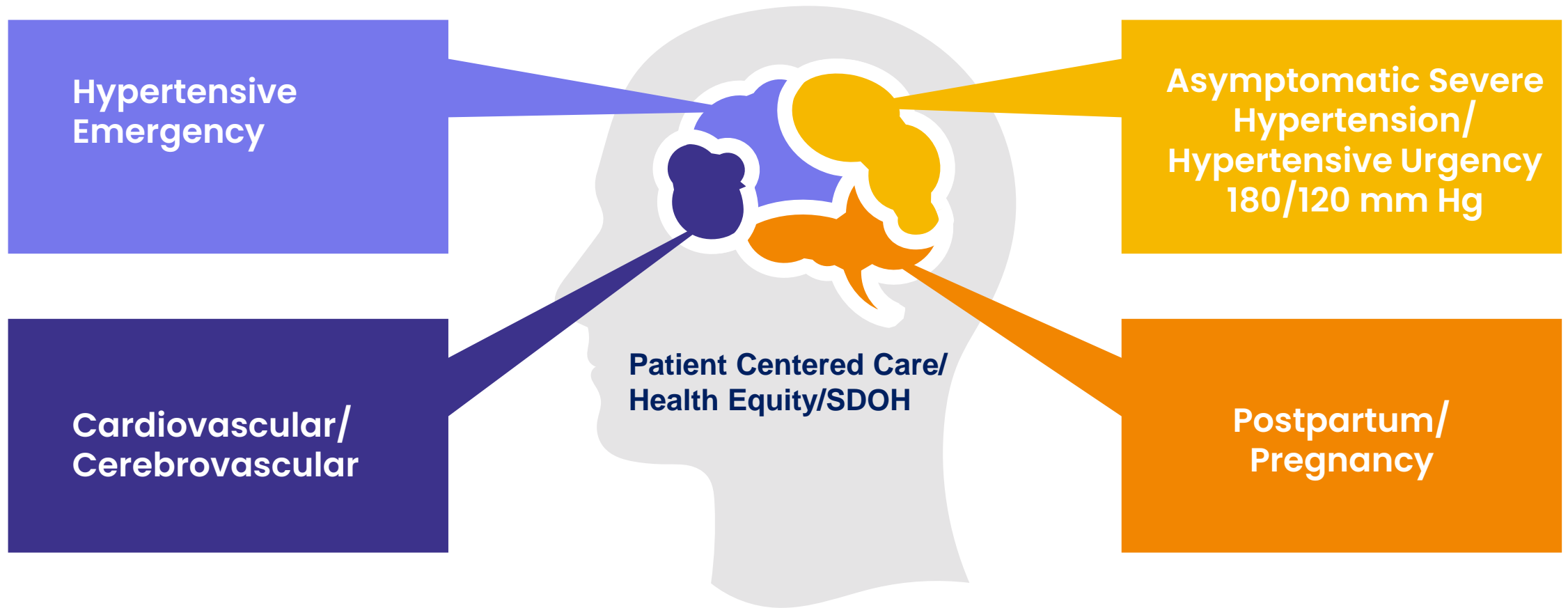


- Acute MI Mortality Rate – IQI 15
- Acute Stroke Mortality Rate – IQI 17
- Mortality for Selected Patient Conditions – IQI 91



NONE

# Goal: Protocol Driven/Team Based Care Delivery







# Hypertensive Emergency

## ED Visits and Admissions Hypertensive Crisis/Emergency



Office of Data Analytics  
in The Office of the Secretary  
**HFSD-241987 - Emergency Department Visits and Admissions due to Hypertension**  
Statewide Totals of Inpatient and Outpatient ED Encounters

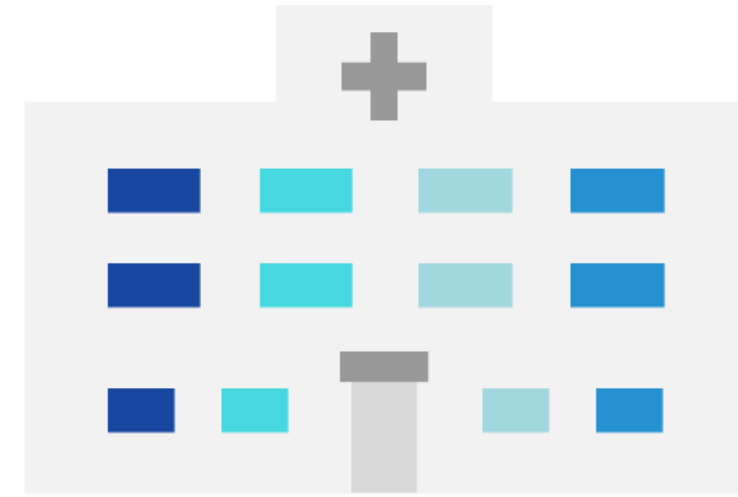
Created By: Michael Lawson  
Created Date: 2/28/2024  
Evaluation Period: 2017-2022

Statewide Outpatient ED encounters and Inpatient encounters admitted from the ED with a discharge date between 1/1/2017 - 12/31/2022 and a principal diagnosis ICD-10 code of I16.0, I16.1, or I16.9

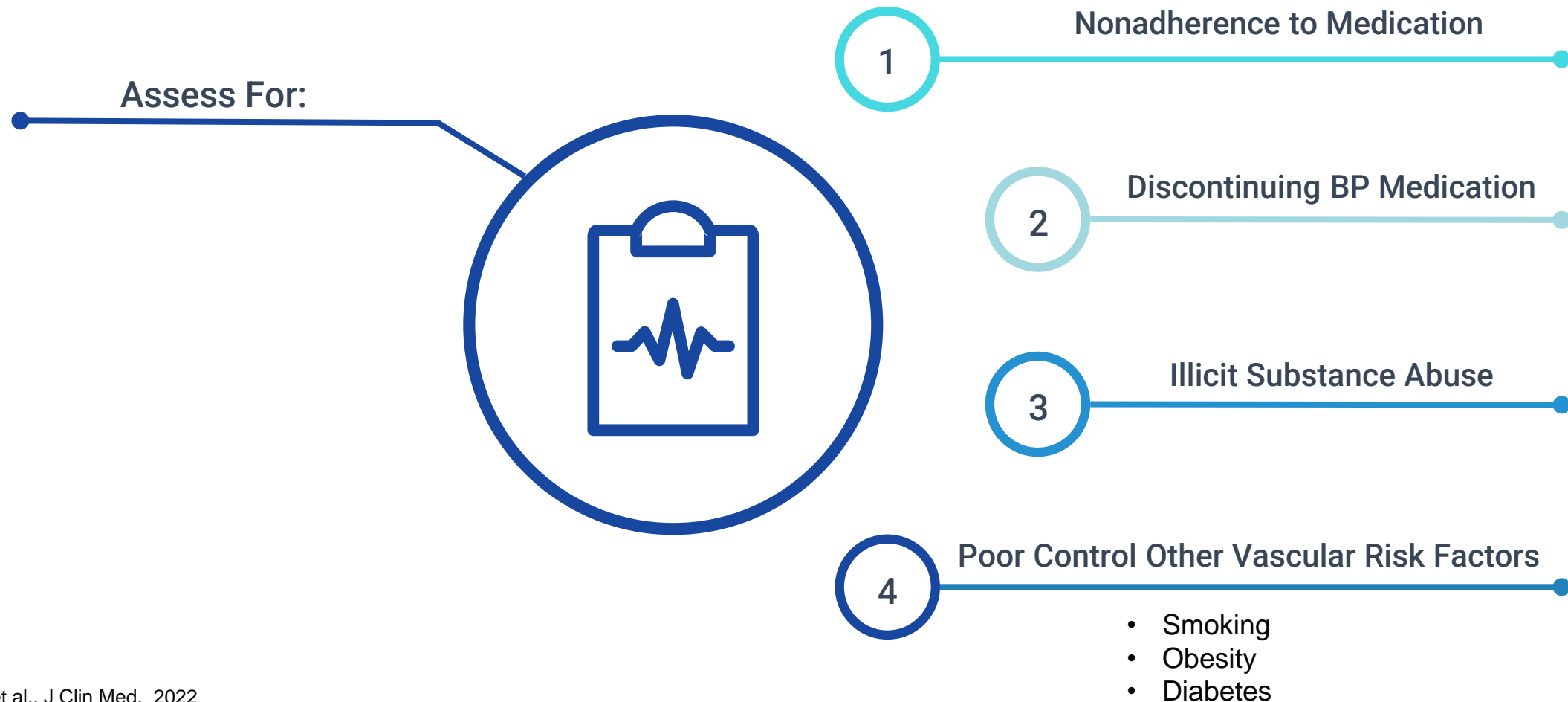
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# Hypertensive Emergency

- Signs or symptoms of end organ damage
- No specific blood pressure range for diagnosis
- 2023 Systematic review and meta-analysis
  - Prevalence of hypertensive emergency among patients presenting with hypertensive crisis to the ED was 50%.
  - 10% in hospital mortality rate
  - Ischemic stroke most prevalent HMOD - 28%
  - Most common complications of hypertensive emergency are ischemic stroke (38%), pulmonary edema/acute CHF (35%), and coronary syndrome (25%)
  - 1 year death rate 79% with median survival 10.4 months untreated
  - ❖ Insufficient resources placed on control of chronic hypertension post discharge
  - ❖ 12-month mortality rate 12-38.9%
- US STAT (Studying the Treatment of Acute Hypertension) Registry
  - In hospital mortality rate 11%



# Most Common Predisposing Factors





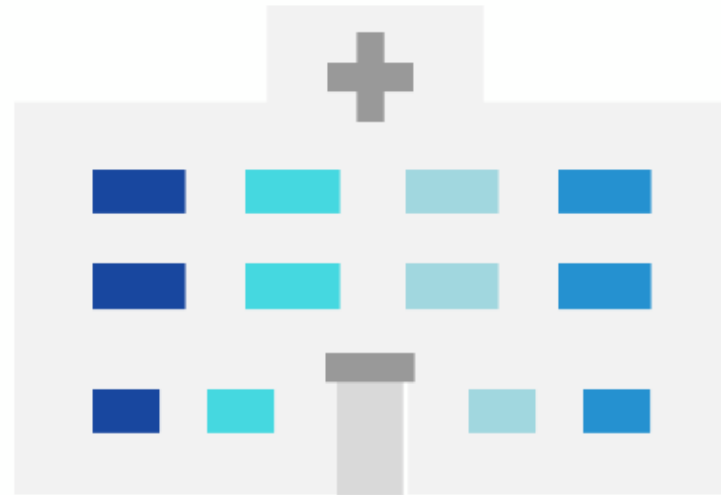


# Hypertensive Emergency



Includes:

- Dissecting aortic aneurysm
- Acute pulmonary edema
- Acute MI
- Unstable angina
- Acute renal failure
- Acute intracerebral hemorrhage
- Acute cerebral ischemia



- Hypertensive Encephalopathy
- Eclampsia or pre-eclampsia
- Peri-operative hypertension
- Pheochromocytoma crisis
- Sympathomimetic hypertensive crisis caused by illicit substance abuse
- Abrupt cessation of some medications





# Hypertensive Emergency Management



Goal of 25% reduction in first hour, and then if stable, to  $<160/<100$  in next 2-6 hours; then normalize over next 24-48 hours.

## Exceptions:

- Acute aortic dissection (SBP  $< 120$  in 20 minutes)
- Severe pre-eclampsia (SBP  $< 140$  in one hour)
- Acute ischemic stroke (thrombolytic candidate  $< 185/110$ )
- Acute ischemic stroke – (Do not treat unless  $> 220/120$ )
- Spontaneous ICH (SBP  $< 130-150$ ). \*\* $< 130$  is harmful

Tailored Treatment Necessary (Protocol driven by clinical condition)

Target end organ

Comorbidities

Specific drug pharmacokinetics and possible adverse reactions





## Severe Asymptomatic Hypertension

# Severe Asymptomatic Hypertension

- Severe BP elevation SBP > 180 and/or DBP >120 in otherwise stable patients without acute or impending change in target organ damage
  - No clinical or laboratory evidence of end organ damage
- No RCTs evaluating treatment and target BP
- No current guidelines for management
- Inpatient BPs may be transiently elevated due to hospitalization factors
  - Pain, Fever, Delirium, Anxiety, Incorrect BP measurement technique
- More evidence is needed to optimize management





# Severe Asymptomatic Hypertension Treatment: Current Evidence

- Duration of time to benefit in hospital usually measured in hours to days
- Patients treated with IV or oral antihypertensive medications (in addition to home medications) are more likely to experience:
  - Increased LOS
  - Transfer to the ICU for hypotension
  - AKI
  - MI
  - Mortality
- Current evidence suggests:
  - Need for conservative management – in general avoid IV antihypertensives
  - Processes and protocols that support adequate transitions of care and f/u



## INPATIENT HYPERTENSION: to treat or not to treat?

Study	Patient population	Exposure	Outcomes	Results
Anderson TS, et al, 2018	Retrospective cohort study, patients over 65 years from VHA, non- cardiac conditions  N=14 915 older adults (median age 76 yrs)	Intensified anti-HTN regimen (higher doses of preexistent drugs)	Intensification of antihypertensive treatment at discharge compared with drugs used before admission	14% patients discharged with intensified anti-HTN  *No differences in rates of intensification among patients with limited life expectancy, dementia, or metastatic malignancy
Jacobs ZG, et al, 2019	Adults hospitalized to the general medicine service with at least one episode of elevated BP  N= 3240	Quality improvement initiative aiming to reduce IV anti hypertensive meds	Number of patients whom receive IV antihypertensives  Systolic BP for those receiving IV medication	IV antihypertensives: 11 vs 7% (OR 0.62, CI 95%, 0.47-0.83)  Systolic BP: 167 vs 168 mmHg (p=0.78)
Pasik SD, et al, 2019	IV antiHTN orders from non-surgical hospital admissions  N= 260	Decrease number of inappropriate orders (without symptoms of HTN emergency or HTN and associated adverse events	Inappropriate orders  Adverse events from inappropriate orders	Inappropriate orders: 8.3 vs 3.3 orders/ 1000 pts-day (p=0.0099)  Adverse events: 3.7 vs 0.8 events/1000 pts-days (p=0.0072)
Anderson TS, et al, 2019	Retrospective cohort study, (>65 yrs), admitted for pneumonia, UTI, or VTE, and discharged to community  N= 14 915	Intensified treatment on discharge or no intensified treatment	30 days readmission  30 days SAEs  1-year cardiovascular events	30 days readmission 21.4 vs 17.7% (HR 1.23 CI 95% 1.07-1.42)  30 days SAEs 4.5 vs 3.1% (HR 1.41 CI 95% 1.06-1.88)  1-year cardiovascular events 13.8% vs 11.9% (HR=1.18, CI 95% CI 0.9-1.4)
Rastogi R et al, 2021	Inpatient, non-cardiac admissions with a least one episode of SBP> 140 mmHg  N= 17 821	Treatment vs not treatment	Composite of AKI, MI, stroke Individual outcomes	Composite 12.5 vs 6.1*  AKI: 11.7% vs 5.8%*  MI:1.3 vs 0.4%*  Stroke: 0.1 vs 0.1%  *Statistically significant
Mohandas et al, 2021	Inpatient, non-intensive care, obstetric, or surgical admission, receiving antiHTN drug  N= 42 771	Treatment with PRN and scheduled anti-HTN agent vs schedule anti-HTN drug	AKI Stroke Abrupt lowering (>25% BP lowering within 1h) In hospital mortality  Hospitalization duration	AKI 15 vs 12.8%* Stroke 0.4 vs 0.1 %* Abrupt lowering 11.1 vs 5.9%*  In hospital mortality 0.8 vs 0.3%*  Hospitalization duration 4.7 vs 2.9 days*  *Statistically significant
Bean-Thompson K et al, 2021	Hospitalized patients with an order for an IV PRN antihypertensive medication  N= 5680	Treatment with I.V. PRN vs no I.V.	  Hospitalization duration  In hospital mortality	IV drugs vs untreated  4.9 vs. 3.1 days*  3.3 vs. 1.6%*  *Statistically significant
Ghazi L et al, 2023	Retrospective multihospital cohort, non-intensive care unit hospitalizations. Patients with HTN, no end organ damage  N= 224 265	HTN during hospitalization without acute target end organ damage (SBP>180 or SBD >110 mmHg)  Treatment= receiving i.v. antiHTN within 3 h of BP elevation.	IV drugs vs untreated  MI  Stroke  AKI  Death	MI 5.9 vs 3.6% HR 1.52 (CI 95% 1.08-2.14)  Stroke 0.7 vs 0.7% (CI 95%, 0.3-1.62)  AKI 23.1 vs 17.7% HR 0.97 (CI 95% 0.81-1.17)  Death 2.6 vs 1.3% HR 0.86 (CI 95% 0.49-1.51)

AKI- acute kidney injury  
MI- myocardial infarction  
Anti-HTN- antihypertensive  
UTI- urinary tract infection  
VTE- venous thromboembolism

Cristina Popa, MD  
@NephroSeeker

Jithu Kurian, MD  
@Jithukurian6





# Postpartum Hypertension

# Postpartum Hypertension

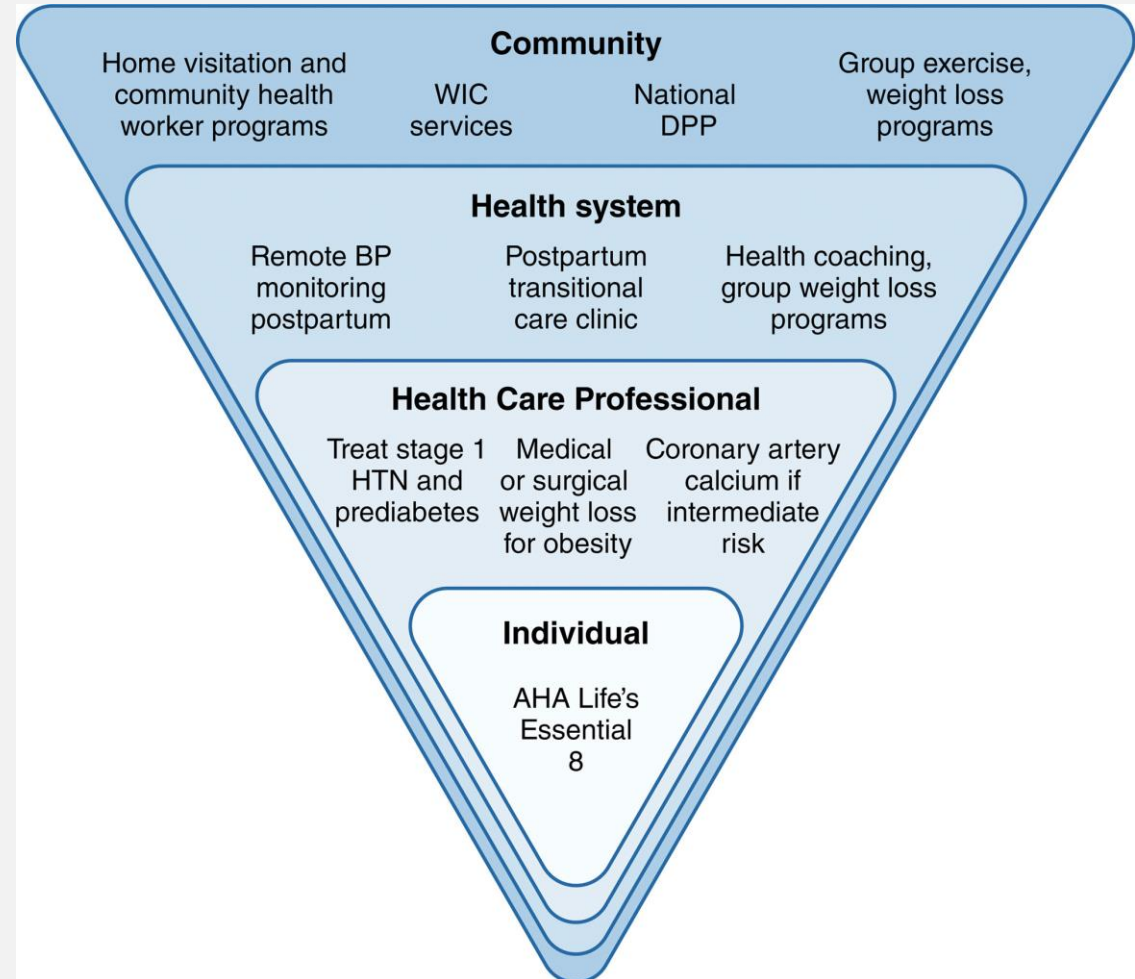
- Hypertensive disorders of pregnancy complicate approx. 10% of pregnancies
- Serious risk during pregnancy and postpartum for stroke and seizure
- Responsible for 15-20% of postpartum readmissions and ED visits in the US
- Patients with BP > 140/90 12-24 hours before discharge have increased risk for readmission
- Peaks postpartum days 3-6
- Current guidelines recommend BP check 3-10 days after discharge, however up to 60% of readmission occur prior to the outpatient visit
- Remote BP monitoring after discharge has been shown to reduce readmissions
- Has become a focus for QI in health systems



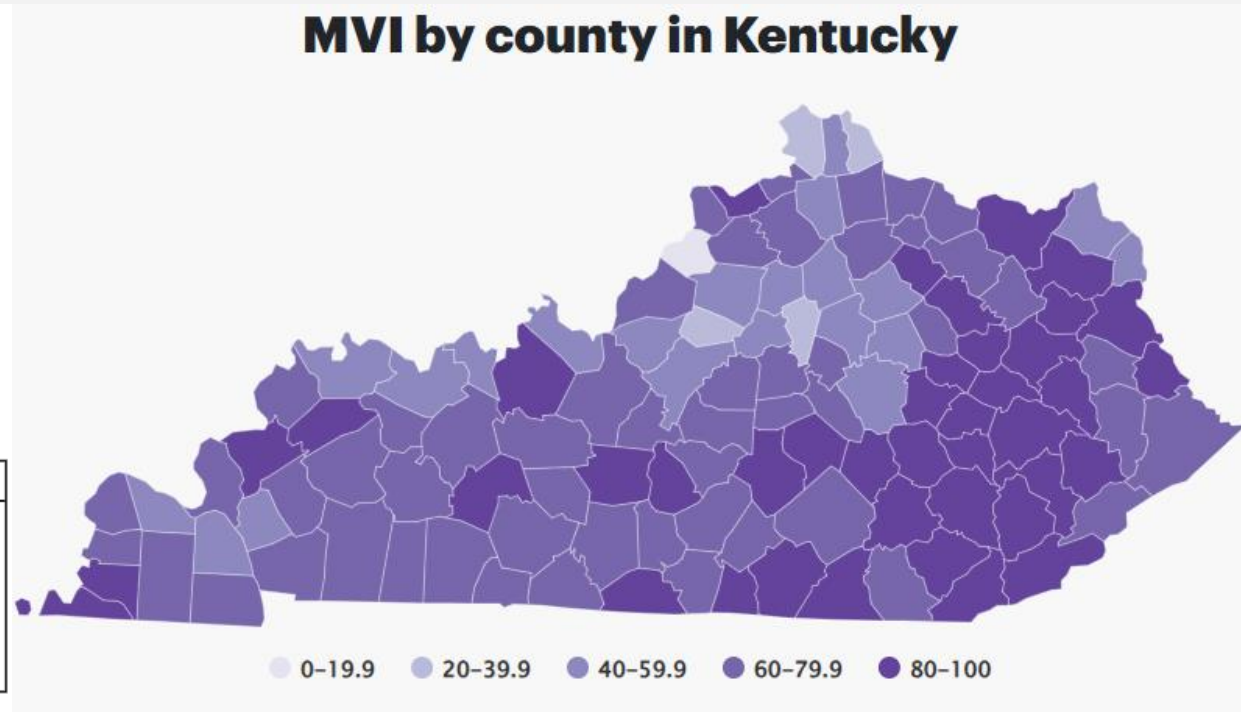
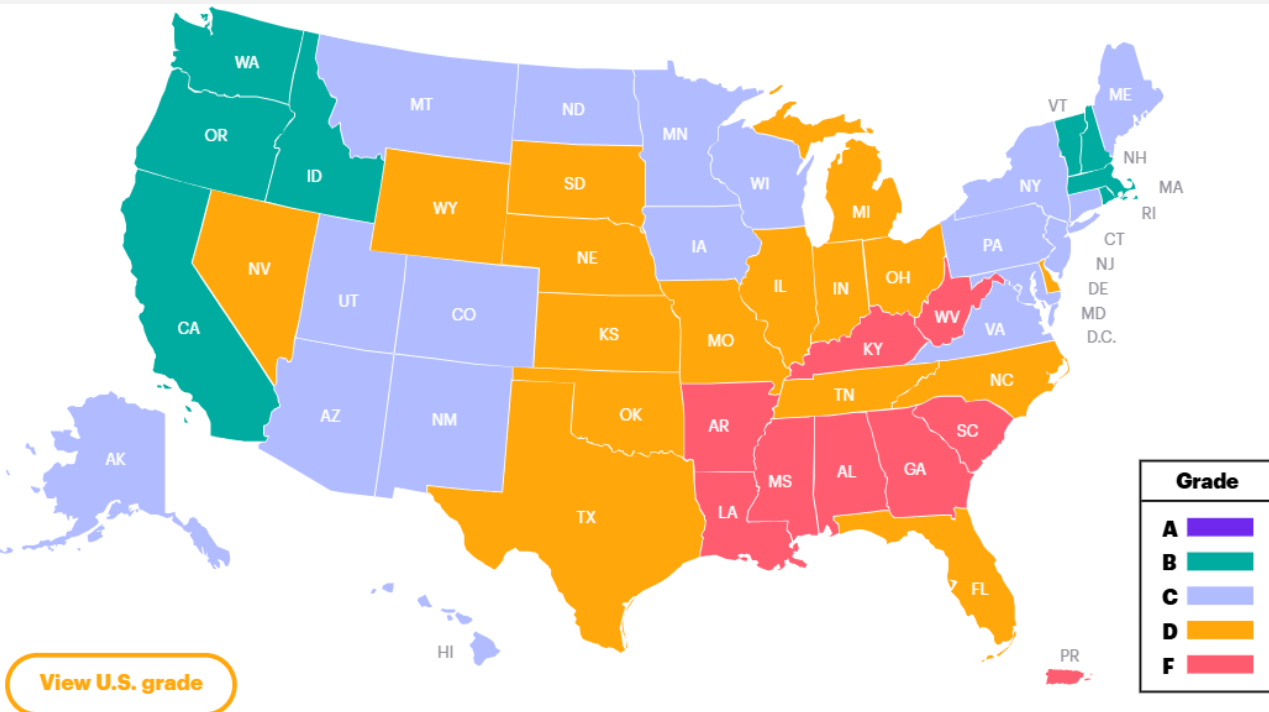


# Postpartum Hypertension Transitions of Care

- 👤 Patient Education
- 👤 Home BP monitoring
- 👤 Text based communication
- 👤 Phone calls
- 👤 Telemedicine programs
- 👤 SDOH Screening and community referrals
- 👤 Lifestyle Interventions
  - 👤 Healthy weight
  - 👤 Healthy diet
  - 👤 Regular physical activity
- 👤 Establish care with PCP
- 👤 Cardiovascular Risk Factor Screening
  - 👤 6 wks, 12 wks, 6 months, 12 months



# March of Dimes Maternal and Infant Morbidity and Mortality



Maternal Mortality per 100,000	
US	Kentucky
23.5	38.4

- Factors related to maternal vulnerability
- SDoH
  - Physical Health
  - Physical Environment
  - Reproductive Healthcare
  - Mental Health and Substance abuse

# Systemic Treatment and Management of Postpartum Hypertension (STAMPP-HTN)

## Bridging the Gap in Postpartum Hypertension

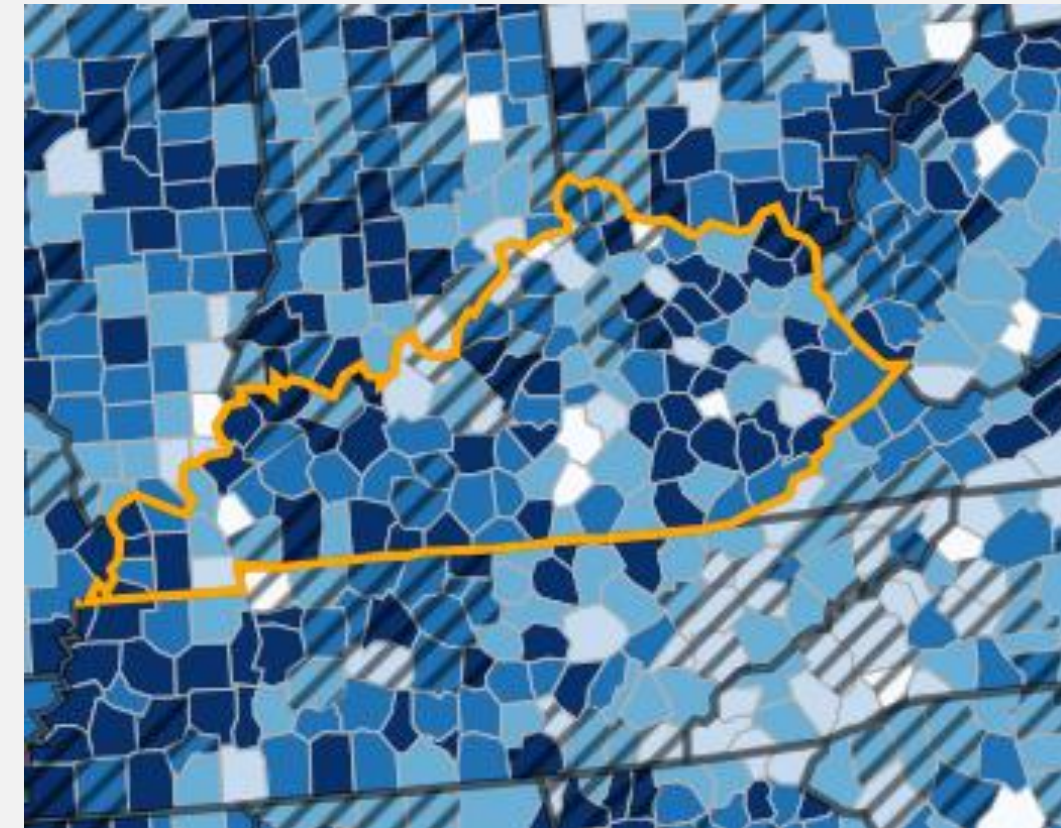
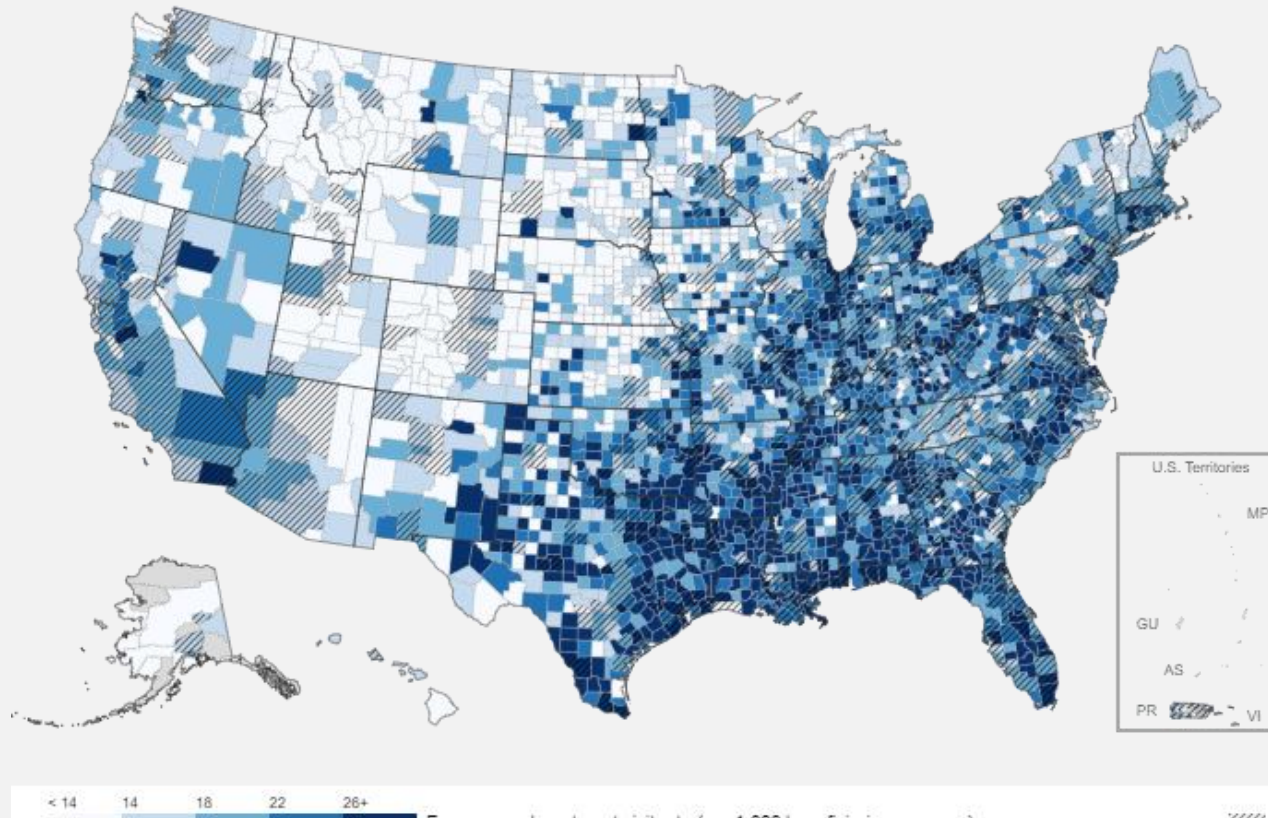
- Education to all patients and care providers
- Updated clinic protocols for patients
- Distribution of a STAMPP-HTN kit, which includes a blood pressure monitor, instructions, warning signs, and a preeclampsia alert wrist bracelet, to all postpartum patients with an HDP
- Consistent scheduling of follow-up appointments before discharge
- Standardized protocols and workflows for the management of patients after hospital discharge



# Outpatient Setting



# ED Visits for Hypertension – 2022 Medicare Beneficiaries



Emergency department visit rate (per 1,000 beneficiaries, per year)

< 14  
14 to < 18  
18 to < 22  
22 to < 26  
26+

Shading indicates urban counties.  
Insufficient Data

# Reasons to Address as a Hospital/Health System



## Financial

- Readmissions
- Complications/LOS
- Regulatory Bodies
- Value Based/Bundled Care
- Prevent comorbidities

## SDOH/HRSN

- Patient Centered Care
- Regulatory Body Requirement
- Financial penalties if not assessed or met
- Health Equity

## Quality

- Disease Specific Care Certifications
- Payor Incentives
- AHRQ
- CMS
- NCQA
- NQF

## Recognition

- Millions Hearts®
- Target BP™/AMA
- HRSA Health Center Program

# Blood Pressure Reduction and Decreased Cardiovascular Event Risk

- Cardiovascular incidence and mortality increase with BP higher than 115/75 mm Hg
- Optimal BP in general population < 120/80 mm Hg

Impact on Mortality - SBP			
Reduction in SBP	Stroke	CHD	Total Mortality
2 mm Hg	-6%	-4%	-3%
3 mm Hg	-8%	-5%	-4%
5 mm Hg	-14%	-9%	-7%

JAMA, 2002

- Decrease in 20 mm Hg SBP and 10 mm Hg DBP associated with > 2-fold decrease in stroke mortality

Lancet, 2002

Age	SBP Blood Pressure Reduced by 10 mm Hg = Decreased Stroke Risk
< 60	54%
60-69	36%
≥ 70	25%

Stroke, 2017

DBP Reduction	Decreased Stroke Risk
5 mm Hg	34%
7.5 mm Hg	46%
10 mm Hg	56%

Lancet, 1990

# Outpatient Populations to Consider Protocol Driven Evaluations/Team Based Care for Hypertension

- CMS CY 2024 Final Rule
- Controlling High Blood Pressure
  - Preventive Care and Screening
    - MIPS CQM
    - eCQM
    - Medicare Part B Claims Measure Specification
    - Telehealth eligible
  - CMS Quality Payment Program
    - Cardiology
    - Internal Medicine
    - Family Medicine
  - NQF 18
  - CMS Comprehensive Primary Care Plus Initiative
  - CMS Medicaid Adult Core Set

Medical Team	Indicator	Quality #	Medicare Claims Part B/ MIPS CQMs/ eCQM ID	Measure Type	Measure Title
Audiology		317	CMS22v12	Process	Preventive Care and Screening for High Blood Pressure and follow up documented: % of patients ≥ 18 years of age screened for high blood pressure AND recommended for f/u plan as appropriate for elevated BP or hypertensive
Cardiology	Outcome	236	CMS165v12	Intermediate Outcome	Controlling High Blood Pressure - % of patients 18-85 with diagnosis of essential hypertension controlled < 140/90 mm Hg
Endocrinology	Outcome	236	CMS165v12	Intermediate Outcome	Controlling High Blood Pressure
Family Medicine	Outcome	236	CMS165v12	Intermediate Outcome	Controlling High Blood Pressure
Internal Medicine	Outcome	236	CMS165v12	Intermediate Outcome	Controlling High Blood Pressure
OBGYN	Outcome	236	CMS165v12	Intermediate Outcome	Controlling High Blood Pressure
Podiatry		317	CMS22v12	Process	Preventive Care and Screening for High Blood Pressure
Pulmonology	Outcome	236	CMS165v12	Intermediate Outcome	Controlling High Blood Pressure
Neurology	*****				
Rheumatology	Outcome	236	CMS165v12	Intermediate Outcome	Controlling High Blood Pressure

# NCQA (HEDIS) – Healthcare Effectiveness Data and Information Set

## Effectiveness of Care:

- Controlling high blood pressure

The percentage of members 18–85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled (<140/90) during the measurement year

- Blood pressure control for patients with diabetes

Percentage of members 18-75 years of age with diabetes (type 1 and 2) whose blood pressure was adequately controlled (<140/90) during the measurement year



# Kentucky HEDIS Hypertension Data 2021-2023

**Table 1: Kentucky Medicaid MCO Enrollment**

MCO <sup>1,2</sup>	Enrollment February 2021	Enrollment February 2022	Enrollment February 2023	Percent Change 2021–2023
Aetna	241,561	247,758	249,833	3.4%
Anthem	156,990	169,531	184,783	17.7%
Humana	165,089	167,958	171,623	4.0%
Molina	320,609	328,980	338,986	5.7%
United	140,139	62,829	95,130	-32.1%
WellCare	465,563	484,599	495,435	6.4%
Total	1,489,951	1,461,655	1,535,790	3.1%

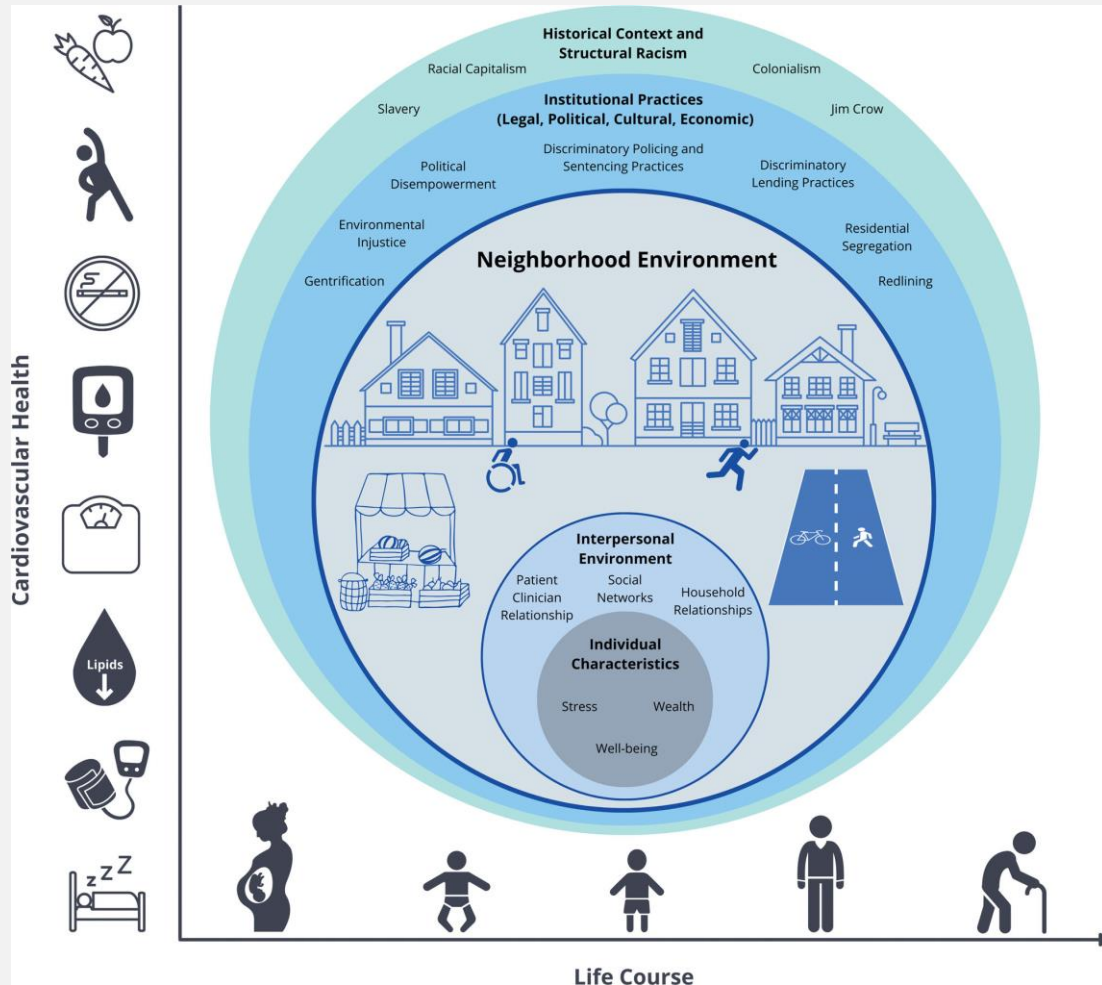
<sup>1</sup> Source: Cabinet for Health and Family Services, Kentucky Data Warehouse Monthly.

<sup>2</sup> Membership counts by county; run dates respectively: 2/2/2021, 2/7/2022, and 1/30/2023.

MCO: managed care organization.

Measure	Data <sup>1</sup>	Kentucky HEDIS Rate Denominators		Weighted Statewide Averages <sup>2</sup>		Trend	Objective Statewide Performance Target (Annual 3%/4%/5%) <sup>3</sup> Increase
	Admin (A) or Hybrid (H)	MY 2020	MY 2021	MY 2020	MY 2021	Percent Change HEDIS MY 2020 to MY 2021	
Goal 2: Improve outcomes associated with people with the chronic diseases of diabetes mellitus, hypertension, COPD, and asthma.							
Comprehensive Diabetes Care (CDC): CDC: HbA1c Good Control (< 8.0%)	H	2,055	2,466	42.53%	44.98%	5.76%	46.83%
CDC: Blood Pressure Control (< 140/90 mmHg)	H	2,055	2,466	60.43%	57.31%	-5.16%	67.97%
CDC: Eye Exam (Retinal) Performed	H	2,055	2,466	48.70%	51.05%	4.83%	54.78%
Kidney Health Evaluation for Patients With Diabetes (KED)	A	60,191	66,099	21.52%	24.25%	12.69%	24.20%
Controlling High Blood Pressure (CBP)	H	2,055	2,466	54.67%	55.52%	1.55%	61.49%

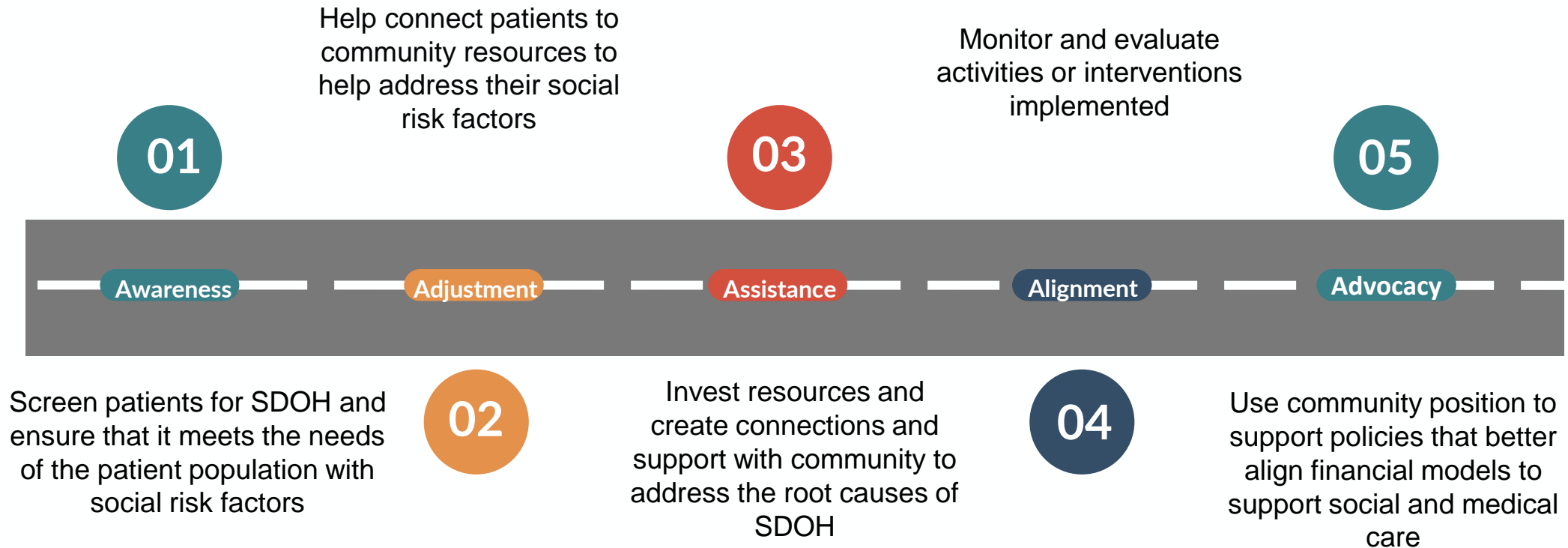
# Interventions Designed to Improve Hypertension Control and Cardiovascular Health.....



## MUST assess SDOH

- Education
- Housing
- Public transportation
- Employment
- Industrial exposures
- Health care facilities
- Healthy foods
- Spaces for exercise, recreation, and congregation
- Environmental stressors such as safety

# Healthcare System Activities That Strengthen Social Care Integration



# SDOH/HRSN Documentation in the EHR

- **CMS – IQRP Requirement**

- Not met 25% reduction in Medicare payment
- Screening SDOH
  - » % of beneficiaries 18 or older screened for SDOH
  - » % of beneficiaries 18 or older who screen positive
  - » Hospital commitment to health equity

- **Medicare Physician Payments**

- » Physician quality metric for screening for SDOH
- » Two new equity improvement activities:
  - LGBTQ+
  - Creating and implementing a language access plan

- **ACO Health Equity Adjustment**

- **Community Health Access and Rural Transformation (CHART) Model**

- **NCQA**

- **DNV/JC**

## SDOH Screening

**G0136:** Recommend Validated Tool – Examples

- CMS Accountable Health Communities Tool
- Protocol for Responding to & Assessing Patients' Assets , Risks, and Experiences (PRAPARE)
- Medicare Advantage Special Needs Population Health Risk

<https://essentialhospitals.org/wp-content/uploads/2023/06/Policy-Snapshot-Health-Equity-Requirements-July-2023.pdf>. Accessed 2/5/2024

<https://www.federalregister.gov/documents/2023/11/16/2023-24184/medicare-and-medicaid-programs-cy-2024-payment-policies-under-the-physician-fee-schedule-and-other>. Accessed 2/15/2024



# SDOH Documentation in EHR

## Z55 – Problems related to education and literacy

- Z55.5 – Less than a high school diploma (Added, Oct. 1, 2021)
- NEW** • Z55.6 – Problems related to health literacy

## Z56 – Problems related to employment and unemployment

### Z57 – Occupational exposure to risk factors

## Z58 – Problems related to physical environment (Added, Oct. 1, 2021)

- Z58.6 – Inadequate drinking-water supply (Added, Oct. 1, 2021)
- NEW** • Z58.8 – Other problems related to physical environment

- NEW** • Z58.81 – Basic services unavailable in physical environment

- NEW** • Z58.89 – Other problems related to physical environment

## Z59 – Problems related to housing and economic circumstances

- Z59.0 – Homelessness (Updated)
  - Z59.00 – Homelessness unspecified (Added, Oct. 1, 2021)
  - Z59.01 – Sheltered homelessness (Added, Oct. 1, 2021)
  - Z59.02 – Unsheltered homelessness (Added, Oct. 1, 2021)
- Z59.1 – Inadequate Housing (Updated)
  - NEW** • Z59.10 – Inadequate housing, unspecified
  - NEW** • Z59.11 – Inadequate housing environmental temperature
  - NEW** • Z59.12 – Inadequate housing utilities
  - NEW** • Z59.19 – Other inadequate housing
- Z59.4 – Lack of adequate food (Updated)
  - Z59.41 – Food insecurity (Added, Oct. 1, 2021)
  - Z59.48 – Other specified lack of adequate food (Added, Oct. 1, 2021)
- Z59.8 – Other problems related to housing and economic circumstances (Updated)
  - Z59.81 – Housing instability, housed (Added, Oct. 1, 2021)
    - Z59.811 – Housing instability, housed, with risk of homelessness (Added, Oct. 1, 2021)

- Z59.812 – Housing instability, housed, homelessness in past 12 months (Added, Oct. 1, 2021)
- Z59.819 – Housing instability, housed unspecified (Added, Oct. 1, 2021)
- Z59.82 – Transportation insecurity (Added, Oct. 1, 2022)
- Z59.86 – Financial insecurity (Added, Oct. 1, 2022)
- Z59.87 – Material hardship due to limited financial resources, not elsewhere classified (Added, Oct. 1, 2022; Revised, April 1, 2023)
- Z59.89 – Other problems related to housing and economic circumstances (Added, Oct. 1, 2021)

## Z60 – Problems related to social environment

### Z62 – Problems related to upbringing

- Z62.2 – Upbringing away from parents
- NEW** • Z62.23 – Child in custody of non-parental relative (Added, Oct. 1, 2023)
- NEW** • Z62.24 – Child in custody of non-relative guardian (Added, Oct. 1, 2023)
- Z62.8 – Other specified problems related to upbringing (Updated)
  - Z62.81 – Personal history of abuse in childhood
  - NEW** • Z62.814 – Personal history of child financial abuse
  - NEW** • Z62.815 – Personal history of intimate partner abuse in childhood
  - Z62.82 – Parent-child conflict
  - NEW** • Z62.823 – Parent-step child conflict (Added, Oct. 1, 2023)
  - Z62.83 – Non-parental relative or guardian-child conflict (Added Oct. 1, 2023)
    - NEW** • Z62.831 – Non-parental relative-child conflict (Added Oct. 1, 2023)
    - NEW** • Z62.832 – Non-relative guardian-child conflict (Added Oct. 1, 2023)
    - NEW** • Z62.833 – Group home staff-child conflict (Added Oct. 1, 2023)
  - Z62.89 – Other specified problems related to upbringing
  - NEW** • Z62.892 – Runaway [from current living environment] (Added Oct. 1, 2023)

### Z63 – Other problems related to primary support group, including family circumstances

### Z64 – Problems related to certain psychosocial circumstance

### Z65 – Problems related to other psychosocial circumstances

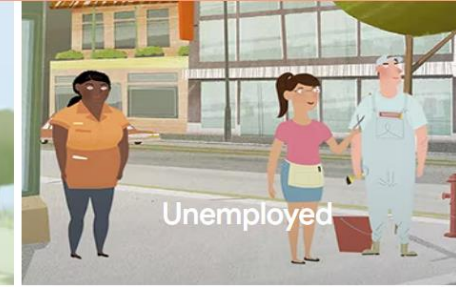




# KHIE

## ePartner Viewer

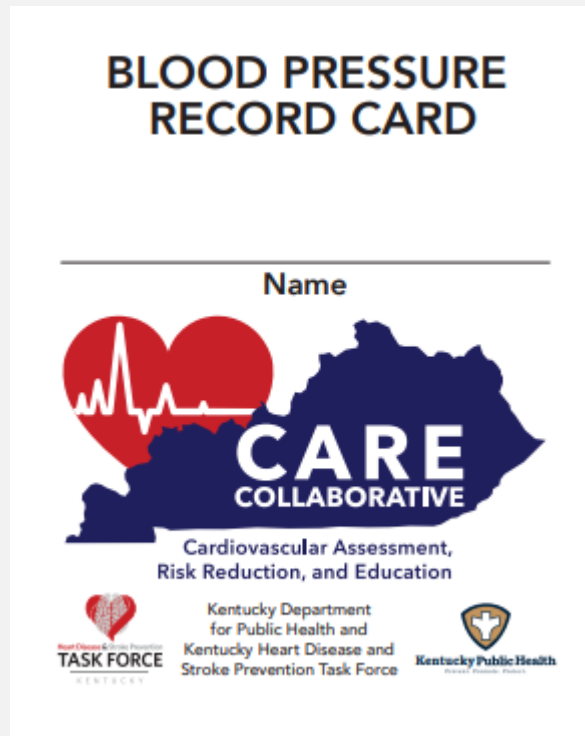
- Standardized Data Tool aligns data through codes to the Kentucky Needs Assessment
- direct link to kynect resources to create referrals
- kynect offers > 14,000 resources across the Commonwealth



# Primary Health Change Strategy in Kentucky

# Cardiovascular, Assessment, Risk Reduction, and Education (CARE) SMBP

- Kentucky's Heart Disease and Stroke Prevention Program's Health Change Strategy
  - Heart Attack and Stroke Signs and Symptoms
  - Smoking Cessation
  - Blood Cholesterol
  - Blood Pressure
  - Sodium Reduction
  - Body Mass Index
  - Hemoglobin A1c







# Self Measured Blood Pressure Monitoring (SMBP) with Clinical Support/Linkages



- Regular monitoring of blood pressure by the patient outside the clinical setting
- Can reduce disability or death due to high blood pressure
- Alternative to in office care
- More convenient and accessible to a larger patient population
- Endorsed by Professional Organizations and Public Health Agencies
  - American Heart Association
  - Centers for Disease Control
  - American Society of Hypertension
  - Preventive Cardiovascular Nurses Association
  - World Health Organization

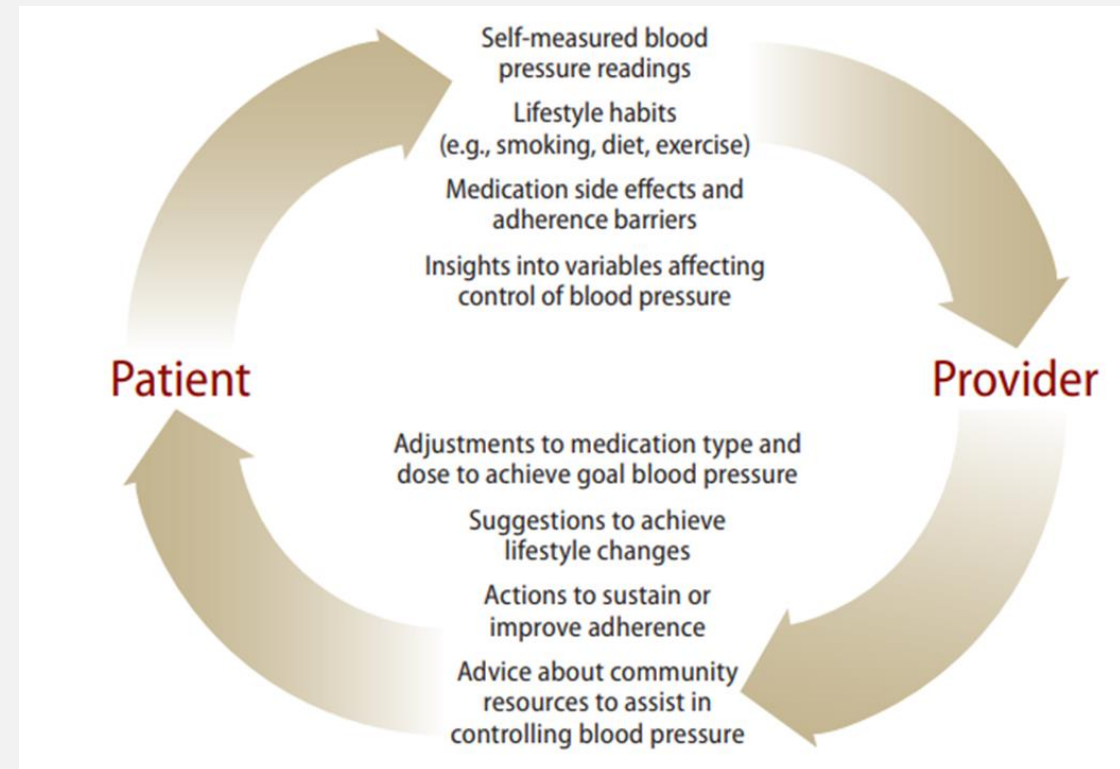




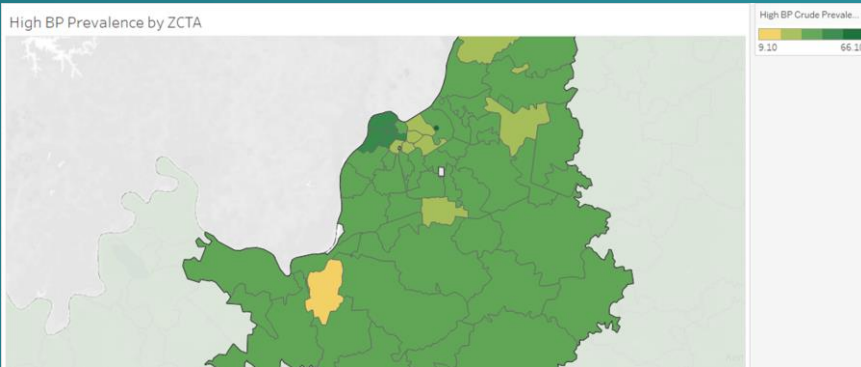
# SMBP Team Based Care

## Formats

- Multidisciplinary HTN clinics
- Specialist HTN clinics
- One-on-one counseling
- Web-based or telephonic telehealth
- Educational classes
- Use of texting, secure messaging, other technology



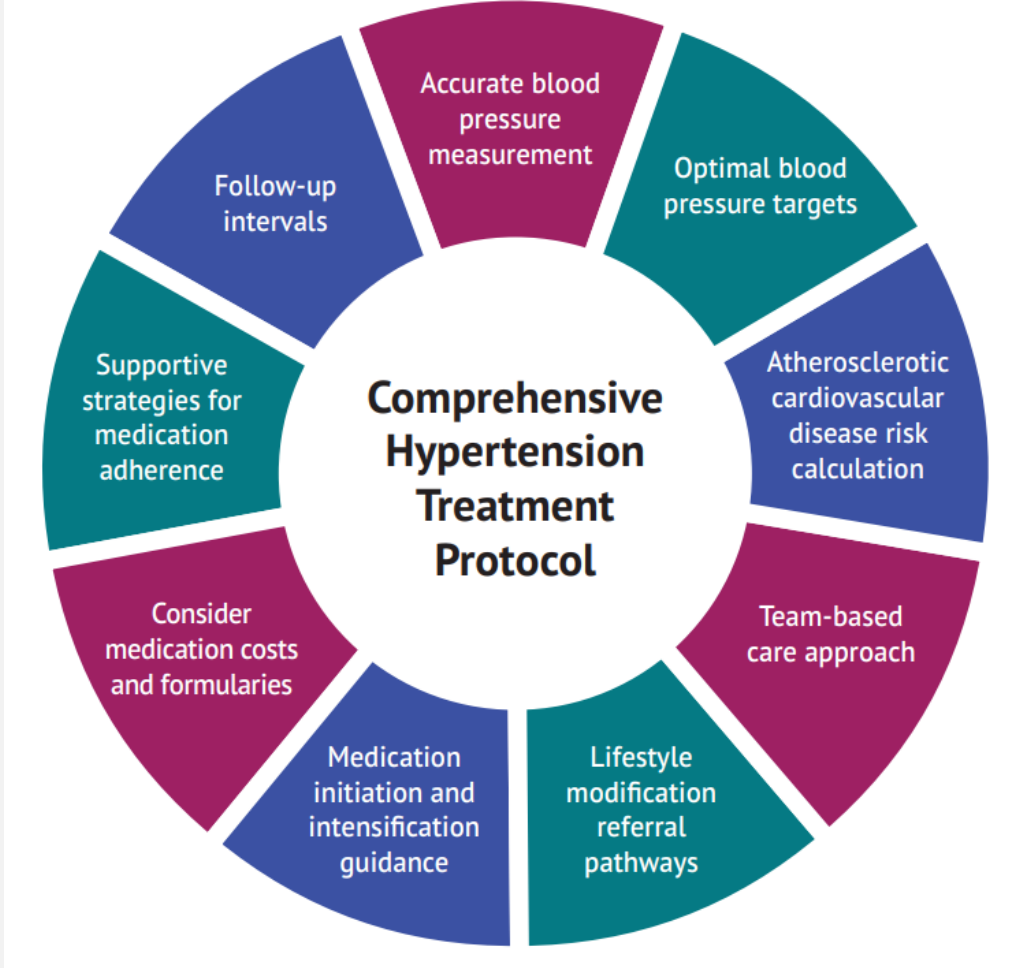
# Collaborative Partnership



## REGIONAL BRAIN INSTITUTE

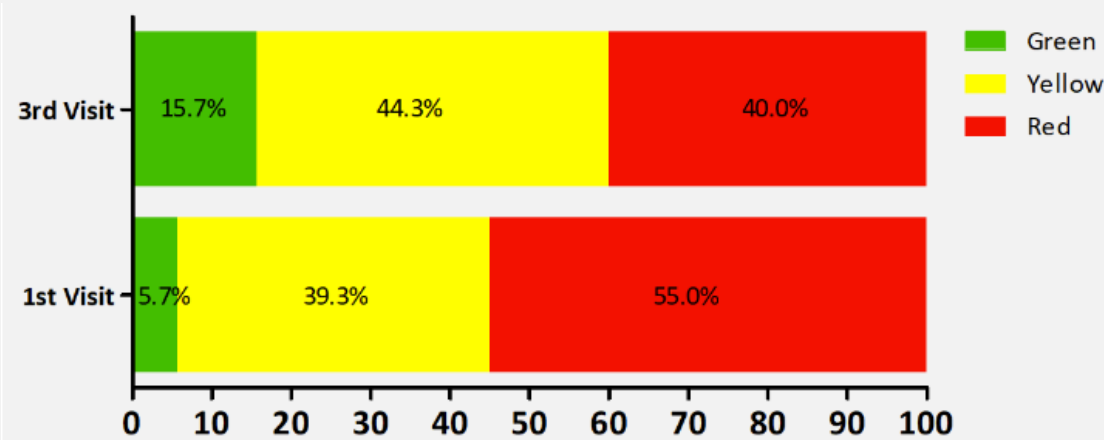
• Map created by KHDSP Program, Oct 2023. Data source: PLACES, Centers for Disease Control and Prevention, <http://cdc.gov/places/>. Accessed Sept 2023.

# Louisville FQHC Cardiovascular Risk Clinic



\* Behavioral Health Services

## Participants 3 or more visits



n = 202	Enrollment (mean ± SE)	Last Visit (mean ± SE)	Mean Difference (95%CI)	p-value <sup>A</sup>
Diastolic BP (mmHg)	85.1 ± 0.8	80.4 ± 0.8	4.68 (2.91 – 6.46)	< 0.0001
Systolic BP (mmHg)	141.3 ± 1.5	132.0 ± 1.4	9.35 (6.29 – 12.4)	< 0.0001

<sup>A</sup> p-value: paired t test, two-tailed

# KY Heart Disease and Stroke Prevention Program

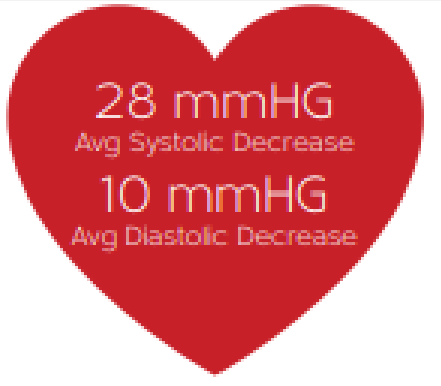
Strategy B.6: Facilitate use of SMBP monitoring with clinical support among adults with hypertension

10 Health Care Systems  
83 Providers



% and # of Participants (n = 772)	
HS degree or less	78%
Unemployed	60%
Medicaid, Medicare, or Uninsured	82%
Hypertension Diagnosis	88%
Uncontrolled BP at Referral	74%
Attended Encounter 1	57%
BP Controlled at Encounter 3	71%

154/87 to 126/77 mmHg





**TABLE 23: RPM HCPCS Codes and Descriptors**

HCPCS code	Short Description	Official Long Description
99453	Rem mntr physiол param setup	Remote monitoring of physiologic parameter(s) (e.g. Weight, blood pressure, pulse oximetry, respiratory flow rate) initial set-up and patient education on use of equipment
99454	Rem mntr physiол param dev	Remote monitoring of physiologic parameter(s) (e.g. Weight, blood pressure, pulse oximetry, respiratory flow rate) initial device(s) supply with daily recording(s) or programmed alert(s) transmission, each 30 days
99457	Rem physiол mntr 1 <sup>st</sup> 20 min	Remote physiologic monitoring treatment services, clinical staff/physician/other qualified health care professional time in a calendar month requiring interactive communication with the patient/caregiver during the month; first 20 minutes
99458	Rem physiол mntr ea addl 20	Remote physiologic monitoring treatment services, clinical staff/physician/other qualified health care professional time in a calendar month requiring interactive communication with the patient/caregiver during the month; each additional 20 minutes (list separately in addition to code for primary procedure)
99091	Collj & interpj data ea 30 d	Collection and interpretation of physiologic data (e.g. Blood pressure, glucose monitoring) digitally stored and/or transmitted by the patient and/or caregiver to the physician or other qualified health professional, qualified by education, training, licensure/regulation (when applicable) requiring a minimum of 30 minutes of time, each 30 days

**TABLE 25: CY 2023 National Non-Facility PFS Payment Rate for G0511**

CPT Code	National Non-Facility PFS Payment Rate
99424	\$81.33
99426	\$61.34
99484	\$43.04
99487	\$133.18
99490	\$62.69
99491	\$85.06
<b>G0511</b>	<b>\$77.94<sup>1</sup></b>

<sup>1</sup> Noting when averaging the six codes, the total RVU for HCPCS code G0511 is 2.295. Multiplying that by the conversion factor of 33.8872 results in \$77.77. However, RVUs on the PFS file are expressed in two decimal places. Thus, we round the 2.295 average to 2.30 which yields 2.30 \* 33.8872, resulting in \$77.94, the current payment rate for HCPCS code G0511.

Additional Revenue Generating Opportunities:

Principal Illness Navigation

Chronic Care Management

Transitional Care Management

Caregiver Training

Community Health Integration

Nonphysician Telephone Assessment & Management



# RPM HCPS Codes and Descriptors

## SMBP Coverage Insights: Medicaid

April 2023 (based on data available 3/15/23)



Self-measured blood pressure (SMBP) is an evidence-based strategy that can improve blood pressure control for individuals with hypertension. SMBP is most effective when an individual has access to a validated blood pressure device for home use coupled with ongoing clinical support. Refer to the [US Blood Pressure Validated Device Listing \(VDL™\)](#) for a list of validated devices.

The chart below shows the status of coverage by state for 1) SMBP clinical services and 2) automated blood pressure devices and standalone cuff. It is intended to highlight which states offer provider reimbursement to perform SMBP services and allow Medicaid patients to obtain an automated blood pressure device.

### CPT® and HCPCS Code Description

99473	SMBP using a device validated for clinical accuracy and patient education/training and device calibration
99474	Separate self-measurements, collection of daily reports by the patient or caregiver to the healthcare provider, communication of BP readings and treatment plans
A4670	Automated blood pressure device
A4663	Blood pressure cuff only

	SMBP Service Codes					BP Device Codes						
	Provider Reimbursement					Durable Medical Equipment (DME) Fee Schedule						
	99473		99474		Source	A4670			A4663			Source
	Covered	Amount Covered	Covered	Amount covered		Covered	Amount Covered	Prior Authorization Required	Covered	Amount covered	Prior Authorization Required	
Georgia	●	\$9.45	●	\$12.82	↗							↗
Hawaii	●	\$7.57	●	\$5.54	↗	●	\$15.00		●	Varies		↗
Idaho	●	\$9.14	●	\$12.56	↗	●	\$56.28		●	Varies		↗
Illinois					↗	●	\$65.13		●	\$15.88		↗
Indiana	●	\$7.60	●	\$10.70	↗	●	\$40.00	○	●	\$27.80		↗
Iowa					↗	●	\$49.36					↗
Kansas					↗				●	\$30.00		↗
Kentucky	●	\$8.03	●	\$11.47	↗	●	\$35.00		●	\$35.00		↗

# Proposed New Reimbursement for Cardiovascular Risk Assessment and Management

- CMS innovation Center
  - Million Hearts Model
    - Cardiovascular risk assessment in collaboration with cardiovascular care management found to reduce death by lowering MI and stroke among Medicare fee-for-service beneficiaries.
  - CY 2025 CMS Proposes the following
    - Coding and payment for Atherosclerotic Cardiovascular Disease (ASCVD) risk assessment service and management
    - Tool Includes
      - Demographic data (age, sex, race)
      - Modifiable risk factors (blood pressure, smoking history, cholesterol, obesity, substance use, physical activity, nutrition, others)
      - Risk enhancers (pre-eclampsia)
      - Lab data (lipid panel)
    - Document 10-year estimate of the patient's ASCVD risk
    - Coding and payment would focus on the ABCs of CVD risk (aspirin, blood pressure management, cholesterol management, smoking cessation)



# American College of Cardiology ASCVD Risk Calculator

27.9% High			Current 10-Year ASCVD Risk <sup>**</sup>		
Lifetime ASCVD Risk: 69%			Optimal ASCVD Risk: 3.9%		
App should be used for primary prevention patients (those without ASCVD) only.					
Current Age ⓘ *		Sex *		Race *	
<input type="text" value="50"/> <small>Age must be between 20-79</small>		<input checked="" type="radio"/> Male <input type="radio"/> Female		<input type="radio"/> White <input checked="" type="radio"/> African American <input type="radio"/> Other	
Systolic Blood Pressure (mm Hg) *		Diastolic Blood Pressure (mm Hg) *			
<input type="text" value="168"/> <small>Value must be between 90-200</small>		<input type="text" value="72"/> <small>Value must be between 60-130</small>			
Total Cholesterol (mg/dL) *		HDL Cholesterol (mg/dL) *		LDL Cholesterol (mg/dL) ⓘ ○	
<input type="text" value="209"/> <small>Value must be between 130 - 320</small>		<input type="text" value="27"/> <small>Value must be between 20 - 100</small>		<input type="text" value="164"/> <small>Value must be between 30-300</small>	
History of Diabetes? *		Smoker? ⓘ *			
<input type="radio"/> Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Current ⓘ <input type="radio"/> Former ⓘ <input type="radio"/> Never ⓘ			
On Hypertension Treatment? *		On a Statin? ⓘ ○		On Aspirin Therapy? ⓘ ○	
<input checked="" type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes <input checked="" type="radio"/> No		<input type="radio"/> Yes <input checked="" type="radio"/> No	
Do you want to refine current risk estimation using data from a previous visit? ⓘ ○					
<input type="radio"/> Yes <input checked="" type="radio"/> No					

# ACC ASCVD Risk Calculator

## Visit Summary

Below is a summary of patient's risk, treatment options, and treatment advice based on the data provided.

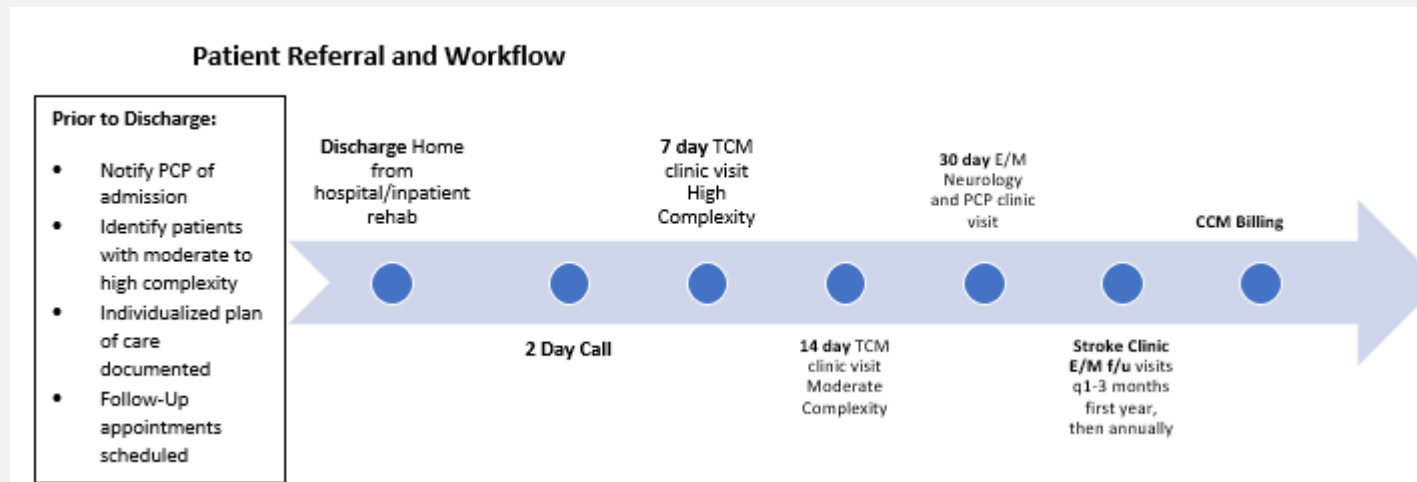
[Email Advice](#)[Print with Complete Treatment Advice](#)[Print](#)

## Treatment Advice<sup>\*</sup>

[Expand All](#)

- ▶ LDL-C Management (for this Patient)
- ▶ Blood Pressure Management (for this Patient)
- ▶ Tobacco Cessation (for this Patient)
- ▶ Diabetes Mellitus Management (General)
- ▶ Lifestyle Recommendations (General)
- ▶ Aspirin Use Recommendations (for this Patient)
- ▶ Immunization Practice (General)
- ▶ Therapy Safety Information (General)

# Transitions of Care Considerations (stroke example)



## Assessment/Current State:

- TIA, Ischemic Stroke, Hemorrhagic Stroke Patient Volume
- Stroke patient payor mix
- Discharge Disposition (home, rehab)
- Preventable stroke patient 30-day readmission rate
- % ED visits post discharge within 30 days
- Current clinic no show rate
- % patients discharged home or to rehab who have an appointment scheduled with PCP and/or stroke specialist within 7-14 days of discharge
- % patients who have medication reconciliation performed within 2 days of discharge

## Rationale for Implementation

- Supports health systems with a mission focused on high quality, evidenced based care with a goal of improved outcomes and excellent patient experience
- Generating new revenue (new billing, downstream revenue /diagnostic testing) and mitigating lost revenue (leakage from system, readmissions, high ED/resource utilizers)
- Coordinated care among healthcare providers
- Medication review and management – ensure correct medications, dose, side effects, and drug interactions
- Follow-Up planning and patient/caregiver education

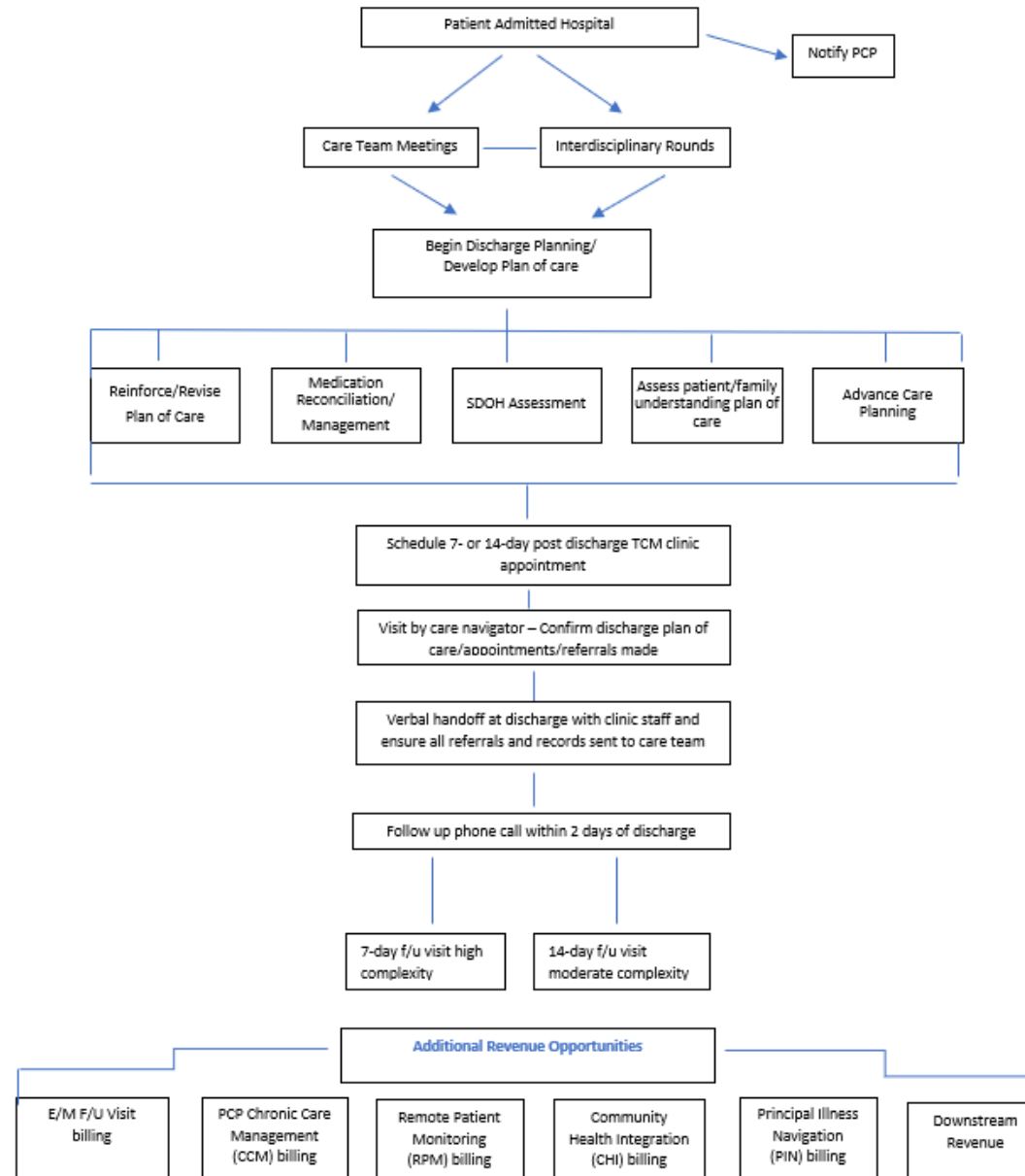


# Possible TCM Evaluation Metrics

- TCM referral volume (by inpatient, rehab, SNF)
- TCM volume by diagnosis (AIS, ICH, SAH, TIA)
- Payor mix
- Hospital LOS
- % patients identified and enrolled within 2 days of discharge
- % of patients who had a 2-day call or documentation of 2 attempts
  - Document barriers to identifying patients prior to discharge and reaching patients
- % of TCM patients scheduled/offered an appointment within 14 days
  - Identity and document barriers
- % of TCM visits completed within 14 days
- Clinic visit duration in minutes
- Median days from discharge to TCM follow up appointment
- 30-day readmission rate and ED visits
- Patient experience scores
- Show rate for outpatient rehab services (PT/OT/SLP)
- Medication adherence
- Blood pressure control  $\leq 130/80$
- New referrals in and out

# TCM RBI Example Workflow

Example Workflow Model



## Together, we can reduce the number of Americans who have heart attacks and strokes.

### Get recognized for practice achievements.

The Target: BP Recognition Program provides an opportunity for physician practices and health systems that treat hypertension to be recognized for their commitment to accurate blood pressure (BP) measurement and improving BP control rates.



#### Participant status

Submit data and commit to reducing the number of adult patients with uncontrolled BP.  
*First-time submission only*



#### Silver status

Submit data and attest to completing at least 4 of 6 evidence-based BP activities.



#### Gold status

Submit data and achieve ≥70% BP control rate (% of adult patients with hypertension whose blood pressure is controlled to <140/90 mmHg)



#### Gold+ status

Submit data, achieve ≥ 70% BP control rate, and attest to completing at least 4 of 6 evidence-based BP activities.

### Recognition Program benefits:

<b>Annual AHA/AMA acknowledgment</b>
Practices will be acknowledged for their active participation in the Target: BP Recognition program at AMA and AHA annual meetings
<b>Recognition on Target: BP website</b>
Practices will be recognized on the Target: BP website
<b>Digital program status seal</b>
For use by HCOs in social media, emails, websites or other marketing materials to help show their commitment to managing high BP
<b>National press release</b>
A joint AMA/AHA press release highlighting and celebrating the commitment of Target: BP HCOs across the country (note: Individual organization names will not be included)
<b>Speaking opportunities*</b>
Have an opportunity to speak about organizational accomplishments with Target: BP at an AHA or AMA event
<b>Recognition Toolkit</b>
Toolkit of template materials and digital assets such as a press release, social media messaging and images
<b>Local recognition</b>
Varies depending on the market. Contact your local AHA office for specifics
<b>Acknowledgment</b>
Gold and Gold+ Level Awardees will be celebrated in a health care trade publication and/or AHA journal



#### KENTUCKY

BHMG Family Medicine Princeton  
BHMG Internal Medicine Paducah  
BHMG Primary Care Murray  
Grace Health  
Grace Health - Bishop Street Clinic  
Grace Health - Falls Hwy Clinic  
Grace Health - Gray/Knox Clinic  
Grace Health - Hyden/Leslie Clinic  
Grace Health - Levi Center Clinic  
Grace Health - Manchester/Clay Clinic  
Grace Health - Mountain View Clinic  
Grace Health - Pineville/Bell Clinic  
Grace Health - University Cumberlands Clinic  
Grace Health - Women's Care Clinic  
St. Elizabeth Healthcare  
Sterling Health Care  
White House Clinics



#### KENTUCKY

BHMG Family Medicine Metropolis  
BHMG Primary Care Village Square



#### KENTUCKY

BHMG Family Medicine Eddyville  
BHMG Family Medicine Paducah  
BHMG Primary Care Benton  
BHMG Primary Care Calvert City  
Bluegrass Community Health Center  
Mountain Comprehensive Care Center HomePlace Clinic  
Shawnee Christian Healthcare Center



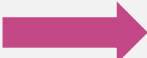
#### KENTUCKY

BHMG Primary Care Strawberry Hills

# Million Hearts® Hospitals & Health Systems Recognition Program

Dr. Jennifer Brull – rural Kansas

## Recommendations:

- Identify tool to measure BP
- Use data to monitor gap between current and target BP rates
- Start with one change that's easy to implement and will have quick benefit
  - Confirming BP is being measured accurately
- Involve the entire health care team
  - Solicit input from everyone in the office (including patients)
- Focus on manageable changes for patients and how improves health
- Strategic Use of EHR
  - Track patient BP in user friendly dashboard
  - Establish BP goals
- Medication Adherence
  - Collaborated with patient, pharmacy, & insurers
    - Alerts from insurance when missed prescription refills
    - Reviewed medications and any side effects during each patient visit
- Maintain Connection/Communication with Patients
  - Patient portal
  - Website
  - Social Media – Facebook, Twitter – X
  - Printed documents for those less tech savvy
- Results:
  - 68%  87% hypertension control rate in 1 year

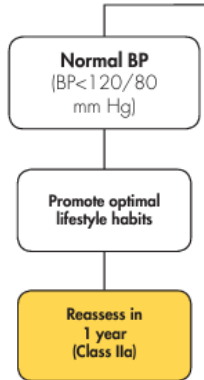
# Educational Resources



## Hypertension Guidelines

Nearly half of Americans have high blood pressure, but you need resources to help your practice so you can provide optimal care for patients with elevated blood pressure (BP) or hypertension.

The 2017 Guideline for Management of High Blood Pressure: A Clinical Practice Guideline for Health-Care Professionals. Nearly 103 million adults in the United States have high blood pressure, and you need resources to help your practice so you can provide optimal care for patients with elevated blood pressure (BP) or hypertension.



### Optimal lifestyle habits

- Healthy diet
- Weight loss, if needed
- Physical activity
- Tobacco cessation, if needed
- Moderation of alcohol consumption



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# Summary

How Can Your Health System  
Help Control Hypertension  
and Prevent Cardiovascular  
Events?

- Kentucky is among the states in US with the highest prevalence of hypertension
- Hypertension is the # 1 cause of heart disease and stroke
- Health Systems can help control hypertension and reduce cardiovascular events by:
  - Implementing evidence-based inpatient and outpatient treatment protocols
  - Documenting SDOH and facilitating collaboration among organizations to maximize access and utilization of community resources to reduce disparities
  - Enhancing EHRs to improve clinical workflows and provide decision support tools
  - Utilizing integrated care teams
  - Facilitating self efficacy through SMBP monitoring
  - Providing clinician feedback on performance