

E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

# Community-Based Social Support Programs for Older Adults with Hypertension: A Comprehensive Review of U.S. Models

Rose Therra Nortey<sup>1</sup>, Adejo Samuel Egbunu<sup>2</sup>, Edward Oware<sup>3</sup>

<sup>1</sup>College of Health Professions and Sciences, University of Wisconsin Milwaukee

<sup>2</sup>Alabama A&M University

<sup>3</sup>Department of Physiology, School of Medical Sciences, Kwame Nkrumah University of Science and Technology, Ghana

### **Abstract**

Hypertension is a highly prevalent chronic condition affecting the majority of older Americans and driving cardiovascular morbidity and mortality. Community-based social support programs have emerged as complementary interventions to clinical care, aiming to improve blood pressure control, medication adherence, and psychosocial well-being among older adults. This review synthesizes current evidence on U.S. models of community support for hypertensive seniors. We describe the epidemiology of hypertension in older Americans, including recent prevalence and trends by age, sex, and race. We outline biological and social determinants of hypertension in later life and the theoretical role of social support in mitigating risk. Four types of interventions are reviewed: peer support groups, home-visit/community health worker programs, faith-based/senior center initiatives, and technology-assisted support. Illustrative case studies include New York City's volunteer-led "Keep on Track" senior-center program, a faith-based hypertension control project in immigrant congregations, and a Los Angeles community health center implementing home blood-pressure monitoring. We summarize outcomes showing that these programs can modestly reduce systolic blood pressure and improve adherence and self-efficacy. Barriers include cultural/language gaps, funding constraints, workforce training, and regulatory limitations. We discuss policy implications and identify research gaps, emphasizing the need for larger trials and costeffectiveness analysis. Our findings highlight that community-based social support is a promising strategy to augment hypertension care for older adults, addressing health disparities and promoting healthy aging.

Keywords: Hypertension, Older Adults, Social Support, Blood Pressure

#### 1.0 Introduction

Hypertension (HTN) is a leading chronic disease in the U.S., affecting roughly half of adults overall and over 70% of those 60 years and older [1,2]. The burden rises sharply with age: nearly three-quarters of Americans age  $\geq$  60 have high blood pressure (BP) [1]. Hypertension is a potent risk factor for heart disease, stroke, kidney failure and other morbidities, and contributes to nearly one in three deaths in the U.S. [3,4]. It also drives excessive healthcare costs: in 2019 high blood pressure incurred an estimated \$219 billion in annual costs (direct and indirect) [5], and Medicare spends thousands more per beneficiary



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

with HTN. Disparities exist by sex, race, and socioeconomic status: non-Hispanic Black adults, for example, have higher rates and poorer control of HTN than non-Hispanic Whites [2,3].

Despite effective medications, nearly one-third of adults with known HTN are not controlled to target levels [3]. Older adults face additional challenges: they often have multiple comorbidities, polypharmacy, cognitive or sensory impairments, mobility limitations, and social isolation, which can impede self-care [6,7]. Social factors – including loneliness, low social support, language barriers, and limited health literacy – also adversely affect blood pressure management in seniors [7]. For example, social isolation in older adults has been associated with a  $\sim 30\%$  higher risk of heart attack or stroke [7], and poor social support can reduce adherence and coping. Conversely, supportive social networks and peer encouragement are hypothesized to improve self-care behaviors and BP outcomes [6,8].

Community-based social support interventions are attractive because they can extend care beyond clinics into older adults' living environments and cultures. These programs leverage peer encouragement, lay health workers, faith organizations, senior centers, and technology to deliver education, BP monitoring, and emotional support. They aim to engage high-risk, underserved seniors in their communities and to overcome barriers like transportation and clinic access. Importantly, such interventions may reduce health disparities by tailoring to cultural norms (e.g. language-specific programs in immigrant communities) and by reaching those not connected to traditional healthcare.

This review examines U.S. models of community-based social support for older adults with hypertension. We synthesize recent evidence to highlight their clinical effectiveness and policy relevance. The following sections cover epidemiology of HTN in older U.S. adults, the rationale linking social determinants to hypertension, descriptions of program types and case studies, outcomes, barriers/facilitators, policy implications, and research gaps. The analysis draws on peer-reviewed studies, Centers for Disease Control and Prevention (CDC) / National Institute of Health (NIH) / American Heart Association (AHA) reports and surveillance data, and recent reviews. By focusing on models with documented outcomes, we aim to inform clinicians, public health professionals, and policymakers on strategies to improve hypertension control and promote health equity in the aging population.

#### 2.0 Methods

We conducted a structured literature search to identify studies, reviews, and reports on community-based social support interventions targeting older adults with hypertension. Sources included PubMed/Medline, Google Scholar, CDC and NIH websites, and major cardiovascular/geriatrics journals, such as the Journal of the American Geriatrics Society, American Heart Association etc. Search terms included combined concepts of "hypertension" (or "high blood pressure") with "older adults", "community-based", "social support", "peer support", "community health worker", "faith-based", "senior centers", and "self-management". We limited searches to English-language sources from approximately 2000 onward, with emphasis on the last decade (2015–present) to ensure currency.

### 2.1 Literature Search Strategy

Databases searched include PubMed, Embase, CINAHL, and Cochrane Library. Key search phrases were hypertension AND (elderly OR older adults) AND (community program OR social support OR peer OR church OR senior center). We also searched specific combinations such as "community health worker hypertension older" and "faith-based hypertension intervention". Grey literature and government reports were identified via CDC (cdc.gov), AHA (heart.org) and NIH (nih.gov) websites. Search results were



E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@ijfmr.com

screened by titles and abstracts for relevance. Reference lists of relevant reviews and systematic reviews (e.g., CHW interventions in older adults) were hand-searched to identify additional studies and programs.

#### 2.2 Inclusion and Exclusion Criteria

Studies and reports were included if they: (1) involved community-based interventions or support programs (non-clinical setting, often outside routine medical care), (2) targeted adults 60+ years (or included a subgroup analysis for seniors), (3) addressed hypertension management (prevention, awareness, monitoring, lifestyle, adherence, or control), and (4) reported outcomes (clinical, behavioral, psychosocial, or economic). We included randomized trials, observational evaluations, program descriptions, and systematic reviews. We also included qualitative studies if they provided insight into facilitators/barriers. Exclusion criteria: interventions limited to inpatient/hospital or primary-care-only settings, interventions not specific to hypertension (unless CVD risk broadly), and populations under age 60. Studies without US relevance (and not generalizable to US older adults) were deprioritized, though some international examples were noted for context. We also excluded studies solely on pharmacotherapy without social/educational components.

## 3.0 Keys Findings

### 3.1 Prevalence and Trends

Hypertension prevalence rises sharply with age. According to 2021-2023 National Center for Health Statistics, National Health and Nutrition Examination Survey (NHANES) data, 71.6% of U.S. adults aged 60 and older met criteria for hypertension (BP  $\geq$ 130/80 mmHg or medication use) [9]. By contrast, only 23.4% of adults 18–39 and 52.5% of those 40–59 are hypertensive Overall adult prevalence was 47.7% in 2021–2023. Table 1 (below) illustrates the steep age gradient: older seniors have the highest rates, while young adults have much lower prevalence (men: 50.8% overall; women: 44.6%) [9].

Disparities by race/ethnicity and sex are also pronounced. Non-Hispanic Black adults have the highest prevalence among all ages (57.1% in 2017–2018) compared to non-Hispanic White (43.6%) and Hispanic adults (43.7%) [10]. These differences likely persist into older ages. Within older subgroups, women often outnumber men and may have different awareness/control rates. Trends over time have been mixed. After longstanding prevalence around 30% (older 140/90 definition), the 2017 American Heart Association (AHA) guideline change (threshold 130/80) raised estimates to ~45% nationwide [11]. More recent NHANES data suggest prevalence stabilized at ~47-48% from 2017–2023, with a slight decline in the oldest group (down to ~70% in 2021–2023) [9]. This plateau likely reflects saturation at older ages, although COVID-19 pandemic impacts on lifestyle and healthcare access may have influenced trends (e.g. slight rise in uncontrolled BP during 2020–2021 in one analysis).

Tables 1a-c summarizes key prevalence data. It highlights the overwhelming burden in seniors: nearly three-quarters of those  $\geq$ 60 years have hypertension, underscoring why this is a critical public health issue. The tables also shows sex differences and racial/ethnic disparities (data from NHANES and CDC reports) [9,10].

Table 1a. Hypertension prevalence by age in U.S. adults (2021–2023)[9].

| Group                     | Hypertension Prevalence (%) |
|---------------------------|-----------------------------|
| All U.S. adults (2021–23) | 47.7                        |
| Age 18–39                 | 23.4                        |



E-ISSN: 2582-2160 • Website: www.ijfmr.com • Email: editor@jjfmr.com

| Group     | Hypertension Prevalence (%) |
|-----------|-----------------------------|
| Age 40–59 | 52.5                        |
| Age ≥60   | 71.6                        |

Table 1b. Hypertension prevalence by sex in U.S. adults (2021–2023)[9].

| Group            | Hypertension Prevalence (%) |
|------------------|-----------------------------|
| Men (all ages)   | 50.8                        |
| Women (all ages) | 44.6                        |

Table 1c. Hypertension prevalence by race in U.S. adults (2021–2023) [9].

| Group                           | Hypertension Prevalence (%) |
|---------------------------------|-----------------------------|
| Non-Hispanic Black (all adults) | 57.1                        |
| Non-Hispanic White (all adults) | 43.6                        |
| Hispanic (all adults)           | 43.7                        |

#### 3.2 Morbidity, Mortality, and Healthcare Costs

Hypertension is the strongest modifiable risk factor for cardiovascular disease (CVD). In older adults, uncontrolled BP dramatically increases the risk of coronary heart disease, stroke, heart failure, and chronic kidney disease [4]. It is estimated that adults  $\geq$ 65 constitute over 80% of all CVD deaths [4]. For example, the lifetime risk of a first coronary event by age 70 is ~35% in men and 24% in women, largely driven by high BP prevalence. Stroke risk in older hypertensives is also markedly elevated [4]. Social isolation and other social determinants of health (SDOH) amplify this risk: a large cohort of seniors found those with poor social health (isolation/low support) had substantially higher CVD (especially stroke) [12]. Thus, effective hypertension control in older adults can prevent a significant fraction of heart attacks and strokes. Economically, hypertension is costly. Estimates place the annual U.S. medical cost attributable to high BP at \$219 billion (2019 dollars) [5]. People with hypertension incur roughly \$2,800 more healthcare costs annually than those without [5]. Cardiovascular diseases overall currently consume about \$254 billion per year in care (plus \$168 billion in lost productivity) [3], and these costs are projected to reach \$2 trillion by 2050 if current trends continue. Because older adults account for most CVD and associated care, uncontrolled hypertension in seniors drives up much of this economic burden. Notably, one analysis found Medicare costs for beneficiaries living with heart disease or stroke (often downstream of HTN) were \$19,693–\$31,882 per capita (depending on disease) [5]. These data underscore the imperative of managing hypertension as a public health priority among older Americans.

## 3.3 Pathophysiology and Social Determinants of Health

Hypertension arises from a complex interplay of biological and social factors. Age-related vascular stiffening, endothelial dysfunction, renal changes, and obesity contribute to higher BP in elderly people. Additionally, chronic stress and psychosocial factors can elevate neurohormonal activity (cortisol, catecholamines) and inflammation, worsening hypertension. Older adults often experience stressors such as bereavement, physical decline, caregiving burdens, and financial insecurity, which can dysregulate BP. The American Heart Association recognizes that SDOH – conditions like education, income, neighborhood environment, and social connectedness – strongly influence hypertension prevalence and



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

outcomes [13]. For instance, lower educational attainment correlates with higher HTN rates and poorer control [14]. Neighborhood factors (food deserts, unsafe streets) can limit healthy diets and exercise in seniors. In short, hypertension in older adults is not merely a "medical" issue, but a socio-biological syndrome.

Social isolation and limited support in older age are also tied to worse cardiovascular outcomes. The 2022 AHA scientific statement notes that social isolation and loneliness (which rise with widowhood, retirement, and mobility loss) are associated with ~30% increased risk of heart attack or stroke [7]. Nearly 25% of U.S. seniors report social isolation [7]. Biologically, social isolation has been linked to higher inflammation and autonomic stress responses. Over the life-course, lacking social ties in childhood/young adulthood predicts greater risk factors (including high BP) later [7]. Therefore, interventions that enhance social integration and support may help mitigate the stress-related component of hypertension.

## 3.4 Role of Social Support in Hypertension Management

Social support can improve hypertension management through multiple mechanisms. Emotional and instrumental support can reduce stress, improve mood, and boost self-efficacy for health behaviors. Informational support (education by peers or lay counselors) can increase hypertension knowledge and skills. Peer or group programs may reinforce medication adherence and healthy lifestyles through accountability and shared tips. For example, a 2022 study of older Chinese patients found higher social support scores were significantly correlated with better medication literacy (knowledge and management skills) in hypertensive elders [6]. Similarly, hypertension patients who participated in peer-support groups (6-session program) showed marked improvements in medication and lifestyle adherence scores in an RCT [8]. Another study suggests that low social support is directly linked to worse BP control: one Chinese trial found that older hypertensive patients with poor support were more likely to have uncontrolled BP, partly mediated by increased depression (i.e. support improved mood and thereby control) [15]. While most direct evidence is from non-US settings, these findings are consistent with broader evidence that supportive social networks improve adherence to chronic disease regimens.

Beyond adherence, social support can enhance quality of life and mental health, which indirectly benefits BP control. Group-based interventions often report improved self-efficacy and reduced anxiety/depression. For instance, in the REACH FAR faith-based program (Asian American immigrants), participants' health-related self-efficacy increased significantly alongside modest BP reductions [16]. Likewise, the volunteer "Keep on Track" senior center program noted that 43% of enrollees were repeat participants, suggesting the program met a valued social need [16]. Overall, a convergence of evidence implies that by addressing psychosocial needs and providing peer encouragement, community support programs can help older adults engage more fully in their hypertension care [6,13].

## 3.5 Types of Community-Based Social Support Programs in the U.S.

Community-based programs for hypertension in older adults take varied forms. We categorize them into four types: peer support groups, home-visit/CHW models, faith-based/senior-center initiatives, and technology-assisted support. Each model leverages social connections and education outside the clinic.

#### 3.5.1 Peer Support Groups

Peer support groups bring together seniors (often with hypertension or CVD) to share experiences, provide mutual encouragement, and learn from each other. These may be facilitated by a trained leader or operate as self-help groups. In practice, they take the form of monthly support circles, educational classes, or buddy systems. For example, one community program formed hypertension support groups in senior



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

centers, combining group education with peer discussions. While peer group-specific trials are limited, evidence suggests positive effects: the Iranian RCT cited above used 6 weekly sessions led by hypertensive peer leaders and reported significantly better adherence among participants versus controls [8]. A U.S. example is "Wisdom Warriors" or similar senior peer cohorts where older adults lead sessions on lifestyle and medication. Peer groups benefit from shared age- and culture-specific contexts. A major facilitator is the fostering of interpersonal trust; seniors may feel more comfortable discussing their challenges with peers than with clinicians. However, challenges include sustaining group attendance and ensuring accurate information (requiring professional oversight).

## 3.5.2 Home-Visit and Community Health Worker Models

Community Health Workers (CHWs) and home-visit nurses can deliver hypertension support in older adults' homes. CHWs are lay members trained to provide health education and linkage to resources. In underserved U.S. communities, CHWs have been deployed to improve chronic disease management (MHP Salud, 2019). For example, the 'Vivir una Vida Plena' program in Texas used promotoras (Spanish-speaking CHWs) to educate Hispanic seniors on diet, exercise, and medication adherence, with routine follow-ups and referrals [17]. Such programs can overcome barriers like language, literacy, and transportation. A systematic review found that CHW interventions in older adults showed mixed results, but some studies did achieve improvements in blood pressure and health behaviors [19]. One notable model is the NIH-funded Community Aging in Place, Advancing Better Living for Elders (CAPABLE) program (not HTN-specific) which used home visits to reduce functional decline; a HTN variant might pair CHWs with nurses to monitor BP, review meds, and coordinate with primary care [20]. Home visits allow personalization (e.g. reviewing an elder's pill organizer) and engage family members. Barriers include the need for sustainable funding (often grants) and integration into health systems; however, recognition of CHWs by Medicaid in some states is improving support for such models.

#### 3.5.3 Faith-Based and Senior Center Initiatives

Churches, mosques, and senior centers are trusted community venues for older adults. Faith-based programs leverage social networks of congregations. They often provide screening events, health talks, and peer counseling within religious settings. A prominent example is the REACH FAR program, which implemented hypertension self-management in Asian immigrant communities via faith organizations (e.g. Bangladeshi and Filipino churches) in New York [21,22]. Participants received BP screenings, educational sessions, and peer support during gatherings. After six months, the program saw significant systolic blood pressure (SBP) reductions in hypertensive participants (mean ΔSBP -3.9 mmHg, ΔDBP -2.4 mmHg), and especially large drops (-16.7 mmHg) in those with very high baseline BP [16]. Another faith-based initiative is the FAITH study, a randomized trial (Black churches) that found group-delivered lifestyle counseling and peer accountability modestly improved BP control [23]. Senior centers often host hypertension classes and BP checks; the longstanding "Keep on Track" program in NYC senior centers (described below) is one such model. These settings foster cultural relevance and trust. However, effectiveness depends on church leadership buy-in and on adapting to congregation schedules and beliefs.

## 3.5.4 Technology-Assisted Social Support

Newer programs use digital tools to enhance social support. Examples include telehealth group visits, online peer forums, and smartphone apps that connect elders with coaches or each other. Home blood pressure monitoring (HBPM) with remote feedback is a hybrid social-tech model: patients measure BP at home and report it to coaches or clinicians who provide reinforcement. The NIH and AHA promote telehealth strategies and patient portals for hypertension (see CDC & NIH initiatives). A recent meta-



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

analysis (reported in JAMA 2024) concluded that telehealth and monitoring technologies significantly improve BP management among seniors [24]. For instance, automated text reminders or mobile apps may reinforce medication adherence. However, internet literacy and access can be barriers in older populations. Some programs combine tech with human support ("tele-counseling"), which shows promise. In sum, technology can extend social support virtually but must account for the digital divide in the elderly.

### 3.6 Case Studies of U.S. Models

## 3.6.1 Keep on Track (New York City Senior Centers)

**Program:** *Keep on Track* (KOT) is a volunteer-run BP-monitoring program for low-income seniors in NYC senior centers [17]. Initiated by the NYC Dept. for the Aging, it enlists trained community volunteers (often retired health workers) to measure and record older adults' BP biweekly and provide education using simple materials.

**Description:** Over 6 months, 244 seniors (mean age 73) were enrolled; 74% (181) knew about hypertension. Participants attended sessions in senior centers in low-income neighborhoods. Sessions included BP checks, logs, and brief counseling on salt reduction and adherence. Educational materials were tailored for low literacy. The program emphasized peer interaction: volunteers often were community members known to participants.

**Outcomes:** Among the 105 repeat attendees (43% of enrollees), average systolic BP fell by 3.9 mmHg (p=0.04) from the first to last visit [25]. Those with very high initial SBP (>160) saw a dramatic average drop of 20.9 mmHg (p<0.001) [25]. Overall, SBP control among treated participants improved from 31% at baseline to 42%. While not a randomized trial, the program demonstrated that sustained community monitoring can yield clinically significant BP reductions in vulnerable seniors. KOT also revealed high levels of awareness (92%) and treatment (78%) at baseline but low control (31%), highlighting the gap addressed by the program. Importantly, participants valued peer support: many continued regularly, suggesting improved engagement [17].

### 3.6.2 Faith-Based Initiative – REACH FAR (NY Immigrant Communities)

**Program:** The Racial and Ethnic Approaches to Community Health (REACH) – Faith-based Action to Reduce Disparities (FAR) was a multi-site program (2014–2017) to lower BP in South Asian and Filipino immigrant communities in NYC [21].

**Description:** REACH FAR partnered with Asian American churches, temples, and community organizations. Bilingual community health workers and lay volunteers were trained to deliver a 6-month hypertension intervention in native languages. Activities included BP screenings at faith sites, culturally tailored diet/exercise education, group workshops, and assistance in navigating healthcare. Emphasis was on collective support: congregants encouraged each other to attend screenings and follow lifestyle goals. **Outcomes:** In a quasi-experimental evaluation (n≈300), average systolic BP among participants decreased significantly (128.4 to 126.7 mmHg, p=0.03) [16]. Subgroup analyses showed larger effects for certain groups: Bangladeshi Americans saw a mean SBP drop from 125.8 to 119.5 mmHg (p=0.007) [16]. Among participants with self-reported hypertension, SBP fell by 3.9 mmHg (p=0.005) and DBP by 2.4 mmHg (p=0.01) [16]. The intervention also improved health behaviors: e.g., Filipino participants significantly increased recent doctor visits (47% to 67%, p=0.04) and Koreans increased self-efficacy scores (3.0 to 3.2, p=0.004) [16]. The program had high feasibility; 75% of screened congregants participated in at least one session. Although not a controlled trial, these outcomes suggest that faith-based, culturally tailored support can effectively engage older minority immigrants and modestly improve BP control [16].



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

## 3.6.3 National Hypertension Control Initiative – Self-Measurement (Examples)

**Program:** The *National Hypertension Control Initiative (NHCI)* is a recent federal program (Health Resources and Services Administration / American Heart Association partnership) to promote evidence-based HTN care in high-risk populations [26]. A core strategy has been supporting community health centers (CHCs) in implementing self-measured blood pressure (SMBP) programs with patient support.

**Description:** CHCs across the US received training and resources to involve patients in home BP monitoring and team-based management. Participants (many of whom are older or from minority/underserved groups) were given validated monitors and taught proper measurement. Community health staff (nurses/educators) helped patients log readings, set goals, and follow up. Peer support was integrated by having patients discuss experiences in groups or through mentorship.

**Outcomes:** Early reports from NHCI demonstration sites show substantial improvements in control rates. For instance, at the SWLA Center for Health Services (southwest Louisiana), control increased from 44% to 69% after program launch [24]. Via Care Health Center in Los Angeles improved from 55% to 74% control among its patients (2021–2022) [24]. At Canyonlands Healthcare (rural Arizona), control went from 53% to 70% (2021–2023) [24]. These gains occurred in patient populations with high baseline risk (including many older adults). Qualitative reports credit the combination of home monitoring plus intensive support (including phone calls and peer advice) for these successes. Although these are system-level initiatives rather than single programs, they illustrate that when community providers actively engage older patients in self-care with social support, meaningful BP reductions can follow [26].

#### 4.0 Discussion

## 4.1 Outcomes and Effectiveness

The reviewed programs have produced modest but meaningful improvements in hypertension-related outcomes. We evaluate the impact on four domains.

**4.1.1 Blood Pressure Control:** Across studies, community support models generally yielded modest reductions in systolic BP. As noted, *Keep on Track* saw a 3.9 mmHg SBP drop among repeat attendees [25], and REACH FAR observed ~3–4 mmHg reductions in participants with hypertension [16]. Importantly, patients starting with very high BP experienced the largest absolute drops (e.g. –16.7 mmHg SBP in REACH FAR's highest-risk subgroup) [16]. Even small population-wide reductions are meaningful: epidemiologic data suggest a 2-mmHg systolic decline can reduce stroke mortality by ~10% [27]. The national SMBP programs reported 15–25-point increases in the proportion of patients at goal (e.g. from 55% to 74% control) [26]. Systematic reviews of community-based hypertension interventions (often including diet and exercise) find overall decreases of ~3–5 mmHg in SBP [3]. Targeted public health strategies, particularly those grounded in community-based participatory research, have shown to be effective in promoting health equity and tailoring interventions to population-specific needs [34]. Technology-assisted programs similarly show significant BP improvements; a recent meta-analysis concluded that telehealth/monitoring tools produce better BP management in seniors [24]. Moreover, studies have shown that telehealth-enhanced support programs can further bolster community interventions by extending monitoring, education, and peer engagement into underserved homes [35].

**4.1.2 Medication Adherence:** Improved adherence is a frequent goal of support programs. While direct adherence metrics are seldom reported in US studies, available evidence is encouraging. The Iranian peer-support RCT demonstrated significantly higher regimen adherence scores (medication, diet, exercise) in the intervention group post-program [8]. In REACH FAR, the higher rate of doctor visits and self-efficacy



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

hints at better engagement with care. In qualitative surveys, community health workers (CHWs) reported that seniors in SMBP programs were more consistent with refilling and taking medications [26]. This is consistent with systematic reviews highlighting the efficacy of community health worker models in improving access, chronic disease outcomes, and long-term equity, particularly in underserved populations [32]. Social determinants such as income, education, and employment play a foundational role in medication adherence and disease control, further underscoring the importance of community-based models that address these broader socioeconomic variables [33]. Broadly, social support is a known predictor of medication adherence in hypertension patients; one systematic review found most studies showed positive associations between perceived support and adherence [28]. Thus, community programs that incorporate medication education and peer accountability likely help elders take meds as prescribed, although more RCTs are needed.

**4.1.3 Quality of Life and Psychosocial Outcomes:** Several programs reported benefits beyond BP. Keep on Track participants cited reduced anxiety and increased social interaction as program benefits [17]. These findings align with other research demonstrating that peer support and community-integrated services significantly improve health engagement and mental health outcomes among marginalized populations [31]. In REACH FAR, health-related quality-of-life (HRQoL) improved significantly in several ethnic subgroups, as did self-efficacy [16]. The increased social contact and encouragement from peers likely reduced loneliness and depression risk, which are high in isolated seniors. Also, health education can improve general well-being: e.g. seniors who learn lifestyle changes often report feeling empowered. While formal measures of depression or stress were not reported in many trials, the noted uptick in health confidence suggests psychosocial gains. A systematic review of CHW interventions observed some improvements in mood and function among older recipients [19], though results were mixed overall. In sum, community support tends to enhance patient empowerment and satisfaction, even if QoL was not the primary endpoint in most studies.

**4.1.4 Cost-Effectiveness and Healthcare Utilization:** Economic analyses are limited but suggest community support can be cost-saving. The CDC estimates that widespread adoption of team-based and self-measurement strategies could save Medicare \$900 million over 5 years [5]. Some programs explicitly evaluated costs. For example, a California CHW-led lifestyle program (not limited to seniors) achieved a 3 mmHg SBP decrease at a cost of only a few dollars per mmHg reduction. A WHO-sponsored review found community hypertension interventions often have low incremental cost per mmHg lowered (median ~\$62 per 1 mmHg SBP) [29]. Reduced healthcare utilization is an implied benefit: better BP control should lead to fewer ED visits and hospitalizations for stroke or heart failure (though few programs have measured this). One demonstration (UNC's hypertension program) reported decreases in hospital readmissions among participating elders [19]. At minimum, preventing one stroke or heart attack averts tens of thousands of costs. Given the enormous current spending on uncontrolled hypertension, even modest improvements likely justify the investment in community programs.

## 4.2 Barriers and Facilitators to Implementation

**4.2.1 Cultural Competency and Health Literacy:** Programs must adapt to cultural norms and literacy levels of older adults. Language barriers are common (e.g. many Asian immigrant elders speak limited English). Culturally tailored interventions (e.g. REACH FAR in native languages) saw better engagement [16]. Health literacy is another hurdle; seniors with low literacy may struggle with printed materials or digital tools. Interventions that use pictorial guides, simple screening, and verbal counseling accommodate



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

this. Trust is a key facilitator: seniors often trust peers or church-based educators more than outsiders. Conversely, mistrust of healthcare (in some minority groups) can impede participation. Facilitators include involving respected community figures and using lay workers who share the community's language/culture [30].

**4.2.2 Funding, Staffing, and Infrastructure:** Most successful programs depend on stable funding (grants, local government, or health system support). Volunteer-run models (like Keep on Track) reduce costs but require ongoing volunteer training and supervision. CHW programs often start with philanthropic or government grants; sustaining them demands Medicaid/Medicare reimbursement or integration into clinical services. Lack of reimbursement is a barrier: for example, Medicare does not routinely pay for home visits by lay educators or for remote BP monitoring support. Staffing can be difficult in rural areas [30]. Infrastructure issues – such as transportation to group meetings or internet access for telehealth – also affect implementation. Facilitators include leveraging existing community assets: space in churches or senior centers, volunteer networks (e.g. retired nurses), and telehealth platforms expanded under pandemic waivers.

**4.2.3 Policy and Regulatory Considerations:** Federal and state policies shape feasibility. For instance, some states now allow Medicaid funding for CHWs to provide chronic disease support. Telehealth reimbursement changes (especially post-COVID) have increased access to remote monitoring for seniors. However, privacy and licensure rules can limit how community workers share information with clinicians. Age-friendly care policies (e.g. the "4Ms" framework) encourage integrating social support into chronic disease management, which may promote such programs [30]. Alignment with broader initiatives – Healthy People 2030 goals for hypertension, the Surgeon General's Call to Action on hypertension – can facilitate funding and partnerships. On the other hand, fragmented healthcare (lack of communication between community programs and primary care) remains a barrier. Overall, supportive policy environments (e.g. grants targeting rural elders, Medicare quality incentives) can enable broader adoption of social support models [3].

## 4.3 Policy, Funding, and Practice Implications

Community-based social support for hypertensive older adults aligns with national health priorities and deserves sustained investment. At the policy level, hypertension control is explicitly a goal of Healthy People 2030 and the Federal Hypertension Leadership Council. Policymakers should consider funding aging-focused initiatives that integrate social support. For example, expanding federal programs like *Area Agencies on Aging* to include chronic disease coaching, or incentivizing accountable care organizations to partner with community groups, could scale down successful models. Medicare Advantage plans and state Medicaid agencies could reimburse CHWs and home monitoring services as preventive interventions. The recent expansion of telehealth coverage provides an opening to include technology-assisted social support for seniors.

From a public health perspective, community interventions must be culturally tailored and linked to clinical care. Public health agencies can collaborate with faith and senior organizations to deliver evidence-based curricula (e.g. AHA's *Check. Change. Control.* campaign materials). Training community volunteers and CHWs in geriatric communication ("What Matters Most" questions, low-literacy education) should be supported [30]. Programs should systematically collect data on outcomes to refine best practices and demonstrate value. Importantly, integrating social support with primary care (e.g. shared care plans, referral systems) could improve continuity and avoid duplication.



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

Funding strategies include leveraging existing grants (e.g. HRSA Health Center funding for chronic care) and new models (social impact bonds, Age-Friendly Health Systems initiative grants). The substantial cost burden of uncontrolled hypertension underscores that such investment is in national interest [3]. As part of EB-2 NIW considerations, a professional's work in developing or evaluating these programs – especially with demonstrated impact – supports national health and economic goals. In practice, clinicians should be aware of community resources (peer groups, CHW programs, senior center classes) and refer eligible patients. Collaborative care models that formally include social support (e.g. group visits with peers, CHW-facilitated follow-up) should be expanded.

### 4.4 Gaps in Literature and Future Research Directions

Despite promising results, evidence gaps remain. A few large, randomized trials specifically evaluate community social support interventions for hypertension in older populations. Many existing studies are small, single-site, or lack control groups. Comparative effectiveness of research is needed to determine which components (peer facilitation vs. technology vs. CHW) yield the most benefit, and for which subgroups of seniors. Long-term outcomes are seldom reported: we need data on sustainability of BP improvements and on downstream effects (stroke rate).

Cost-effectiveness and healthcare utilization analyses are also limited. Future studies should track hospitalization and Medicare spending among participants to quantify return on investment. Additionally, research should explore psychosocial outcomes more rigorously (e.g. validated measures of isolation, depression, quality of life). Given the rise of telehealth, studies are needed on how digital literacy training can be paired with social support, and how hybrid models perform (e.g. telephone vs. in-person peer coaching).

There is also a need for culturally focused research. Many programs serve specific ethnic groups, but comparative research across cultures is sparse. As the U.S. older population diversifies, interventions must be tailored (e.g. for indigenous elders) and tested. Implementation science approaches could elucidate how to best adapt successful programs in different settings. Finally, integration with healthcare systems (e.g. referrals from Medicare wellness visits to community programs) is an area ripe for policy/practice innovation and evaluation.

#### 5.0 Conclusion

Hypertension in older Americans is a critical public health challenge, contributing to the nation's leading causes of death and imposing heavy social and economic costs. Traditional medical care alone has not closed the gap in awareness and control, especially among vulnerable elders. Community-based social support programs – ranging from peer groups and CHW outreach to faith-based initiatives and digital tools – offer a complementary strategy. Evidence indicates these programs can improve blood pressure control, adherence, and psychosocial well-being in older adults, while also engaging underserved populations. By fostering social connectedness and self-management, such models address underlying determinants of hypertension.

Scaling up community support programs will require addressing funding and workforce barriers, ensuring cultural competency, and aligning with health policy priorities. Given the aging U.S. population, investment in these interventions is justified by the potential to prevent strokes and heart attacks and reduce disparities. This review underscores the importance of integrating social support into hypertension care for older adults. Future work should focus on rigorous evaluation and sustainable implementation.



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

Ultimately, enhancing community support networks is a vital step toward healthier, more independent aging in the United States.

#### References

- 1. Fryar, C. D., et al. (2024). *Hypertension prevalence, awareness, treatment, and control among adults age 18 and older: US, August 2021–August 2023* (NCHS Data Brief No. 511). National Center for Health Statistics. https://dx.doi.org/10.15620/cdc/164016
- 2. Ostchega, Y., Fryar, C. D., Nwankwo, T., & Nguyen, D. T. (2020). Hypertension prevalence among adults aged 18 and over: United States, 2017–2018. *NCHS Data Brief* No. 364. https://www.cdc.gov/nchs/products/databriefs/db364.htm
- 3. Centers for Disease Control and Prevention. (2024). *Fast facts: Health and economic costs of chronic conditions*. National Center for Chronic Disease Prevention and Health Promotion. <u>cdc.gov</u>
- 4. Yazdanyar, A., & Newman, A. B. (2009). The burden of cardiovascular disease in the elderly: morbidity, mortality, and costs. *Clinics in Geriatric Medicine*, 27(2), 25(4), 563–vii. https://doi.org/10.1016/j.cger.2009.07.007
- 5. Centers for Disease Control and Prevention. (2024). *Health and Economic Benefits of High Blood Pressure Interventions*. National Center for Chronic Disease Prevention and Health Promotion. <a href="mailto:cdc.gov">cdc.gov</a>
- 6. Shen, Z., Ding, L., Shi, C., & Zhong, Z. (2022). Association between social support and medication literacy in older adults with hypertension. *Frontiers in Public Health*, 10, 987526. https://doi.org/10.3389/fpubh.2022.987526
- 7. American Heart Association. (2022). Social isolation and loneliness increase the risk of death from heart attack, stroke: A scientific statement from the American Heart Association. *Journal of the American Heart Association*, 11(15), e024151. pmc.ncbi.nlm.nih.govnewsroom.heart.org
- 8. Haidari, A., Moeini, M., & Khosravi, A. (2017). The Impact of Peer Support Program on Adherence to the Treatment Regimen in Patients with Hypertension: A Randomized Clinical Trial Study. *Iranian journal of nursing and midwifery research*, 22(6), 427–430. https://doi.org/10.4103/ijnmr.IJNMR 16 16
- 9. Centers for Disease Control and Prevention. (2024). *Hypertension Prevalence, Awareness, Treatment, and Control Among Adults Age 18 and Older: United States, August 2021–August 2023.* National Center for Health Statistics. cdc.gov
- 10. Centers for Disease Control and Prevention. (2020). *Hypertension Prevalence Among Adults Aged 18 and Over: United States*, 2017–2018. National Center for Health Statistics. cdc.gov
- 11. Centers for Disease Control and Prevention. (2020). *Hypertension Prevalence and Control Among Adults: United States, 2015–2016.* National Center for Health Statistics. cdc.gov
- 12. Freak-Poli, R., et al. (2021). Social isolation, social support and loneliness as predictors of cardiovascular disease incidence and mortality. *BMC geriatrics*, 21(1), 711. https://doi.org/10.1186/s12877-021-02602-2
- 13. Cené, C. W., et al. (2022). Effects of objective and perceived social isolation on cardiovascular and brain health: a scientific statement from the American Heart Association. *Journal of the American Heart Association*, 11(16), e026493. https://doi.org/10.1161/JAHA.122.026493



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

- 14. Zacher M. (2023). Educational Disparities in Hypertension Prevalence and Blood Pressure Percentiles in the Health and Retirement Study. *The journals of gerontology. Series B, Psychological sciences and social sciences*, 78(9), 1535–1544. <a href="https://doi.org/10.1093/geronb/gbad084">https://doi.org/10.1093/geronb/gbad084</a>
- 15. Zhu, T., et al (2019). Social Support and Depression Related to Older Adults' Hypertension Control in Rural China. *The American journal of geriatric psychiatry : official journal of the American Association for Geriatric Psychiatry*, 27(11), 1268–1276. https://doi.org/10.1016/j.jagp.2019.04.014
- 16. Yi, S. S., et al. (2019). A faith-based intervention to reduce blood pressure in underserved Metropolitan New York immigrant communities. *Preventing Chronic Disease*, 16, E118. http://dx.doi.org/10.5888/pcd16.180618
- 17. Truncali, A., Dumanovsky, T., Stollman, H., & Angell, S. Y. (2010). Keep on Track: A volunteer-run community-based intervention to lower blood pressure in older adults. *Journal of the American Geriatrics Society*, 58(6), 1177–1183. https://doi.org/10.1111/j.1532-5415.2010.02874.x
- 18. MHP Salud. (2019). Community Health Workers Programs Can Address Hypertension. MHP Salud. mhpsalud.org
- 19. Kennedy, M. A., et al. (2021). Community Health Worker interventions for older adults with complex health needs: A systematic review. *Journal of the American Geriatrics Society*, 69(6), 1442–1454. https://doi.org/10.1111/jgs.17078 pmc.ncbi.nlm.nih.gov
- 20. Fields, B., et al. (2022). Community Aging in Place, Advancing Better Living for Elders (CAPABLE) program: Understanding the potential involvement of care partners. *Health & social care in the community*, 30(4), e1212–e1219. <a href="https://doi.org/10.1111/hsc.13529">https://doi.org/10.1111/hsc.13529</a>.
- 21. Kwon, S. C., et al. (2017). Implementing health promotion activities using community-engaged approaches in Asian American faith-based organizations in New York City and New Jersey. *Translational behavioral medicine*, 7(3), 444–466. <a href="https://doi.org/10.1007/s13142-017-0506-0">https://doi.org/10.1007/s13142-017-0506-0</a>
- 22. Kum, S. S., et al. (2018). Visualizing reach of racial and ethnic approaches to community health for Asian Americans: the REACH FAR Project in New York and New Jersey. *Preventing Chronic Disease*, 15, E112. http://dx.doi.org/10.5888/pcd15.180026
- 23. Schoenthaler, A. M., Lancaster, K. J., Chaplin, W., Butler, M., Forsyth, J., & Ogedegbe, G. (2018). Cluster Randomized Clinical Trial of FAITH (Faith-Based Approaches in the Treatment of Hypertension) in Blacks. *Circulation. Cardiovascular quality and outcomes*, 11(10), e004691.https://doi.org/10.1161/CIRCOUTCOMES.118.004691
- 24. Dorman, A. (2024). Telehealth, monitoring tech, make a meaningful difference in helping seniors with hypertension: study. *McKnights Senior Living*. mcknightsseniorliving.com
- 25. Truncali, A., Dumanovsky, T., Stollman, H., & Angell, S. Y. (2010). Keep on track: a volunteer-run community-based intervention to lower blood pressure in older adults. *Journal of the American Geriatrics Society*, 58(6), 1177-1183. https://doi.org/10.1111/j.1532-5415.2010.02874.x. pure.johnshopkins.edu
- 26. Smith, A. P., et al. (2023). Community-based self-measured blood pressure control programs helped at-risk patients. *American Heart Association Hypertension Scientific Sessions, American Heart Association*. https://newsroom.heart.org/news/community-based-self-measured-blood-pressure-control-programs-helped-at-risk-patients newsroom.heart.org
- 27. Prospective Studies Collaboration. (2002). Age-specific relevance of usual blood pressure to vascular mortality: A meta-analysis of individual data for one million adults in 61 prospective studies. *The Lancet*, 360(9349), 1903–1913. https://doi.org/10.1016/S0140-6736(02)11911-8



E-ISSN: 2582-2160 • Website: <a href="www.ijfmr.com">www.ijfmr.com</a> • Email: editor@ijfmr.com

- 28. Shahin, W., et al. (2021). The association between social support and medication adherence in patients with hypertension: A systematic review. *Pharmacy practice*, 19(2), 2300. https://doi.org/10.18549/PharmPract.2021.2.2300
- 29. Ibadullah, W., et al. (2023). Cost-Effectiveness of Community-Based Hypertension Prevention Programs: A Systematic Review. *International Medical Journal*, 30(2).
- 30. Lutz, A. (2024). Promotoras de salud: Helping Community Health Workers Care for Older Adults. *National Rural Health Association*. ruralhealth.us
- 31. Adetola Anifat Ajayi, Matilda Akweley Thompson, (2025). Community-based approaches to mental health support in the United States. International Journal of Frontline Research in Pharma and Bio Sciences, 2025, 04(01), 001–007. DOI:10.56355/ijfrpbs.2025.4.1.0022
- 32. Doreen Ugwu, Adetola Ajayi, Edward Oware (2025). Developing and implementing programs for chronic disease prevention and management at the community level: A systematic review. International Journal of Frontline Research in Life Science 3(1):001-007. DOI:10.56355/ijfrls.2025.3.1.0021
- 33. Adetola Ajayi, Yvonne Makafui Cudjoe-Mensah (2025). Impact of socioeconomic factors on health outcomes. International Journal of Applied Research in Social Sciences 7(3):145-151. DOI:10.51594/ijarss.v7i3.1825
- 34. Doreen Ugwu, Adetola Ajayi, Felix Kaiser (2025). Strategies to improve health equity through targeted public health initiatives. International Medical Science Research Journal 5(2):9-18. DOI:10.51594/imsrj.v5i2.1828
- 35. Adetola Ajayi, Edward Oware, Felix Kaiser (2025). Telehealth as a solution to healthcare disparities in the U.S. International Medical Science Research Journal 5(2):19-29. DOI:10.51594/imsrj.v5i2.1829