

Heart Disease and Stroke Prevention: Team-based Care to Improve Blood Pressure Control, Updated 2026

Community Preventive Services Task Force Finding and Rationale Statement Ratified December 2020

Table of Contents

Intervention Definition	2
CPSTF Finding.....	2
Rationale	2
Basis of Finding	2
Applicability and Generalizability Issues	5
Data Quality Issues.....	6
Other Benefits and Harms	6
Economic Evidence	6
Considerations for Implementation.....	7
Evidence Gaps	8
References	9
Disclaimer.....	9
Appendices of Supporting Documents	10
Appendix A: Analytic Framework (Effectiveness Review)	11
Appendix B: Search Strategy (Effectiveness Review)	12
Appendix C: Included Studies (Effectiveness Review)	22
Appendix D: Analytic Framework (Economic Review)	27
Appendix E: Search Strategy (Economic Review)	28
Appendix F: Included Studies (Economic Review)	38
Appendix G: Summary Evidence Table (Economic Review)	41

Suggested citation:

The Community Preventive Service Task Force (CPSTF). *Heart Disease and Stroke Prevention: Team-based Care to Improve Blood Pressure Control, Updated 2026*. The Community Guide [www.thecommunityguide.org]. The Community Preventive Service Task Force, Atlanta, Georgia, 2026. <https://doi.org/10.15620/cdc/168666>

CPSTF Finding and Rationale Statement

Intervention Definition

Team-based care to improve blood pressure control is a health systems-level, organizational intervention that uses a multidisciplinary team to improve the quality of care. Team-based care is established by adding new staff or changing the roles of existing staff who work with a primary care provider.

Each team includes the patient, the patient's primary care provider, and other professionals such as nurses, pharmacists, dietitians, social workers, and community health workers. Team members provide process support and share responsibilities of blood pressure control to complement the activities of the primary care provider. Responsibilities include medication management, patient follow-up, and adherence and self-management support.

Team-based care interventions typically include activities to do the following:

- Facilitate communication and coordination of care support among various team members
- Enhance the use of evidence-based guidelines by team members
- Establish regular, structured follow-up mechanisms to monitor patients' progress and schedule additional visits as needed
- Actively engage patients in their own care by providing them with education about blood pressure (hypertension) medication, adherence support (for medication and other treatments), and tools and resources for self-management (including self-measured blood pressure monitoring and health behavior change)

CPSTF Finding (December 2020)

The Community Preventive Services Task Force (CPSTF) recommends team-based care to improve blood pressure control based on strong evidence of effectiveness in improving the proportion of patients with controlled blood pressure and in reducing systolic and diastolic blood pressure (SBP and DBP). Findings provide strong evidence of effectiveness for team-based care organized primarily with nurses and pharmacists working in collaboration with primary care providers, patients, and other professionals. Evidence shows meaningful improvements in blood pressure control for Black or African American and Hispanic or Latino patients. When implemented by health care providers to serve patients from racial and ethnic minority groups, interventions are likely to advance health equity.

The CPSTF finds team-based care to improve blood pressure control cost-effective. Systematic review evidence shows the median cost per quality adjusted life year (QALY) gained for team-based care is \$15,202, which is below a conservative threshold of \$50,000.

Rationale

Basis of Finding

The CPSTF recommendation is based on evidence from a review of 54 studies (search period January 2012 - June 2020). The CPSTF assessed evidence to be strong based on the magnitude of effect estimates, number of studies, and consistency of effects. This recommendation updates and replaces the 2012 finding of strong evidence of effectiveness for team-based care to improve blood pressure control. The update focuses on evidence from studies published since the 2012 finding.

Evidence from the 54 included studies showed interventions lead to improvements in blood pressure outcomes (Table 1). Studies also showed team-based care improved lipid and diabetes-related outcomes, especially total cholesterol, and low-density lipoprotein (LDL) cholesterol (Table 2).

Table 1. Intervention Effects on Blood Pressure Outcomes

Outcome	Number of Studies	Effect Estimate	Direction of Effect
Improvement in the proportion of patients with controlled blood pressure*	39	Median increase of 8.5 percentage points (IQI: 2.8 to 17.8 percentage points)	Favors the intervention
Mean systolic blood pressure (SBP)	44	Median decrease of 3.5 mmHg (IQI: -6.8 to 0.1 mmHg)	Favors the intervention
Mean diastolic blood pressure (DBP)	35	Median decrease of 2.1 mmHg (IQI: -4.7 to -0.4 mmHg)	Favors the intervention

*Absolute percentage point difference in proportion of patients achieving blood pressure control. Blood pressure control was based on guidelines used by the study for controlled systolic and diastolic blood pressure (<140/90 mmHg or <130/80 mmHg).

IQI: Interquartile Interval

mmHg: Millimeters of mercury

Table 2. Intervention Effects on Lipid and Diabetes-related Outcomes[^]

Outcome	Number of Studies	Median Study Effect Estimate	Direction of Effect
Mean total cholesterol	8	Median decrease of 3.8 mg/dL (IQI: -7.7 to -3.2 mg/dL)	Favors the intervention
Mean low-density lipoprotein (LDL)	13	Median decrease of 3.9 mg/dL (IQI: -8.6 to -0.4 mg/dL)	Favors the intervention
Mean high-density lipoprotein (HDL)	7	Median increase of 0.7 mg/dL (IQI: -1.5 to 2.2 mg/dL)	No effect
Mean triglycerides	5*	Median decrease of 4.4 mg/dL (IQI: -14.2 to -0.4 mg/dL)	Favors the intervention
Hemoglobin A1C levels	10**	Median decrease of 0.10% (IQI: -0.31% to 0.02%)	Favors the intervention

[^]All study designs included in median effect estimates

* One additional study reported no change in HDL levels overall (p=0.2)

**One additional study reported a favorable, but not statistically significant change in A1C control (Odds ratio: 1.2 [95%CI -0.4, 3.6 p=0.79])

IQI: Interquartile Interval

mg/dL: Milligrams per deciliter

Seven studies examined intervention effect on overall risk for cardiovascular disease. Four studies that used a version of the Framingham 10-year risk score reported results that were favorable and statistically significant (2 studies), favorable (1 study), or showed no change (1 study). The remaining three studies evaluated cardiovascular disease risk using other measures and reported results that were favorable and statistically significant (1 study), and favorable (2 studies). Reductions in cardiovascular disease risk were generally meaningful.

Team-based care members who worked with patients and primary care providers were predominantly nurses (22 studies), pharmacists (13 studies), or both (7 studies). Clinical pharmacists delivered interventions in 11 studies. Additional team members included community health workers or lay health workers (9 studies), dietitians (6 studies), medical assistants (6 studies), clinicians providing consultations on hypertension management (3 studies), physician's assistants (2 studies), pharmacy technicians (2 studies), occupational therapists (2 studies), and social workers (2 studies).

When pharmacists were added to teams, median improvements in blood pressure control and systolic blood pressure were greater than the overall median effect estimates for these outcomes. When nurses were added to teams, median improvements in blood pressure control and systolic blood pressure were similar to the overall median effect estimates. When both pharmacists and nurses were added to teams, median improvements were greater for blood pressure control and systolic blood pressure than the overall median effect estimates. The included studies added one (24 studies), two (17 studies), or three or more team members (12 studies). Patients experienced greater improvements in blood pressure control and systolic blood pressure when two or more people were added to the team (e.g., pharmacist or nurse).

Most of the included studies described team members' roles in managing patient blood pressure medications. Team members were able to change blood pressure (hypertension) medications independent of the primary care provider (16 studies); made changes with primary care provider approval or consultation (16 studies); or had no role in medication changes (15 studies). Teams that allowed members to change medications with or without primary care approval or consultation achieved larger improvements in blood pressure outcomes when compared with teams that did not.

Additional team member roles included support and management for patients' self-measured blood pressure (SMBP) monitoring (21 studies) and follow-up checks for blood pressure (30 studies). Overall, studies that included SMBP showed greater improvements in blood pressure outcomes (e.g., blood pressure at goal) than studies that did not, especially when a team member or provider interacted with patients (15 studies). Similarly, interventions that had team members manage patients' follow up checks showed greater improvements in blood pressure outcomes when compared with interventions that did not.

Team members commonly provided health behavior counseling, coaching, or education to support blood pressure management (18 studies), medication adherence (19 studies), or lifestyle activities (31 studies). When interventions included lifestyle counseling, coaching, or education, median improvements in blood pressure control and systolic blood pressure were greater than the overall median effect estimates.

Studies reported that primary care providers most often communicated with one or more team members through electronic medical records (27 studies) or direct team communication (22 studies). Less common communication

channels included email (4 studies), telephone (4 studies), other digital formats (6 studies), and referral for consultation (7 studies).

Team-based care interventions were similarly effective for patients identified or referred for care with blood pressure not under control (16 studies), and patients recruited or referred with a diagnosis of hypertension regardless of baseline control status (37 studies).

Applicability and Generalizability Issues

Included studies were conducted in the United States (38 studies), Australia (3 studies), Germany (2 studies), Hong Kong, China (2 studies), and the United Kingdom (2 studies); one each was done in Canada, Denmark, Italy, Netherlands, South Korea, Sweden, and Switzerland.

The median age of patients was 61.6 years. Findings from this systematic review are applicable to adults and likely, older adults. Included studies reported an even distribution of females (50.5%) and males (49.5%) with findings applicable to both.

Patients were recruited primarily from health care systems (47 studies), including the U.S. Armed Forces and Veteran's Health Administration (6 studies), and federally qualified health centers (2 studies). In six studies, teams provided care to patients in community settings, ranging from barber shops to senior centers. Findings are applicable for health care and community-based settings.

Studies had fewer than 100 patients (2 studies), 100 to 499 patients (26 studies), or 500 or more patients (25 studies). Small-scale studies (500 patients or less) reported slightly larger median effect estimates than large-scale studies (more than 500 patients). Studies were conducted for 6 to 12 months (22 studies), 12 to 18 months (20 studies), or 18 months or longer (11 studies), defined by the last time point after baseline assessment.

Thirty-four of the studies from the United States reported on racial and ethnic distributions or socioeconomic factors. Patients who were White (median 48%; 30 studies), Black or African American (median 23%; 28 studies), or Hispanic or Latino (median 11.7%; 19 studies) were well-represented across studies, indicating applicability of findings to these groups. While none of the included studies provided stratified assessments of effectiveness by race or ethnicity, results from studies in which more than 50% of the participants identified as Black or African American (9 studies) and studies in which more than 35% of participants identified as Hispanic or Latino (4 studies) showed improvements in blood pressure control greater than the overall median effect estimates.

Included studies provided limited information about socioeconomic or insurance status and analysis by these variables. Six studies examined intervention effectiveness for patients whose annual household income was less than \$35,000. In four of these studies, more than 50% of the patients fell into this category. Among this population, favorable changes in systolic blood pressure and blood pressure control were smaller in magnitude, compared to the overall median effect estimates. Fourteen studies reported patients' education levels. In two of these studies, more than half of the patients had less than a high school education and results were mixed. Overall, thirty-three studies reported on insurance status. Twelve studies reported on public health insurance (Medicare or Medicaid) with six studies showing results in line with the overall median effect estimates when more than half of the patients received Medicare or Medicaid.

Team-based care interventions included a variety of digital health components. Patients used digital devices for SMBP (21 studies), had access to a web portal or website for self-monitoring and communication with other team members (6 studies), and used electronic communication systems such email (8 studies). Team members used a software program or

digital device (14 studies) and tracked patient progress in a registry system (6 studies). Although no studies directly compared intervention effectiveness by type and use of digital health component, findings are likely applicable to interventions that employ digital health components for patient self-management, monitoring, and patient-team communications.

Data Quality Issues

Study designs included randomized controlled trials (27 studies), non-randomized trials (2 studies), other designs with a concurrent comparison group (1 study), retrospective and other cohorts (9 studies), time series (4 studies), and before-after without control (11 studies). The most common limitations assigned, according to Community Guide quality scoring methods, were for sampling issues (45 studies), intervention and study description (37 studies), and data analysis (25 studies).

Other Benefits and Harms

None of the included studies reported or examined additional benefits of team-based care interventions. CPSTF did not postulate any additional benefits of these interventions.

None of the included studies reported or examined potential harms of team-based care interventions. CPSTF did not postulate any harms of these interventions. Team-based care commonly includes proactive monitoring and follow-up which provides opportunities to identify and address potential adverse effects from blood pressure (hypertension) medications.

Economic Evidence

Economic evidence shows team-based care interventions to improve blood pressure control are cost-effective. The economic review included 35 studies (search period January 2011 through January 2021). All monetary values are reported in 2020 U.S. dollars.

Studies were based in the United States (23 studies), the United Kingdom (4 studies), China – Hong Kong (2 studies), Argentina (2 studies), Canada (2 studies), Australia (1 study), and Singapore (1 study). Studies were set in primary care clinics (26 studies), hospitals (2 studies), a hypertension clinic (1 study), a community pharmacy (1 study), and other settings (5 studies). The majority of studies (22 studies) were implemented in urban areas.

The median sample size was 252. The median age of patients was 59 years, and the median percentage of female participants was 54%. In the 35 studies, primary care providers were supported by other team members involved in medication management and other medication roles (e.g., medication changes with primary care provider approval, medication review; 20 studies), monitoring patients' blood pressure (22 studies), and education, counseling, or coaching (27 studies). Blood pressure control was the focus of the intervention (17 studies) or part of chronic disease management, which included management of type 2 diabetes (18 studies).

The economic review team assessed the quality of evidence by considering how well each estimate captured the components considered to be drivers of magnitude and the appropriateness of measurement and valuation; the lower of the two assessments was used to determine overall quality. The most frequently reported limitation for intervention cost estimates (16 good quality, 15 fair quality) were missing cost of training or cost of information system enhancements. The most frequently reported limitations for health care cost estimates (6 good quality, 10 fair quality) were missing emergency department visits, short follow-up periods, all-cause rather than cardiovascular disease-related health care utilization, and failure to adjust for baseline covariates. The most frequently reported limitations for return

on investment estimates (5 good quality, 9 fair quality) and cost per QALY estimates (11 good quality, 4 fair quality) were missing worksite productivity, time horizons shorter than 10 years, and lack of fade-out for intervention effect.

Intervention Cost

- The median intervention cost per patient per year was \$299 (\$168 to \$518), based on 31 estimates from 29 studies.

Health care Cost

- The median change in health care cost per patient per year was -\$140 (IQI: -\$386 to \$30), based on 16 estimates from 16 studies.

Net Cost

Net cost is measured as the sum of the change in health care cost due to intervention and the cost of intervention. A negative value indicates the averted health care cost is greater than the intervention cost.

- The median net cost per patient per year was \$133 (IQI: \$-\$16 to \$495), based on 19 estimates from 17 studies. Five estimates were negative and 14 were positive.

Return on Investment (ROI)

ROI, from the health system perspective, is the ratio of the difference in averted health care cost and intervention cost to intervention cost. ROI is favorable if the estimate is greater than zero.

- The median ROI was -80% (IQI: -130% to 20%), based on 14 estimates from 14 studies. Ten ROI estimates were negative and four were positive.

Cost-benefit

There were no studies that reported cost-benefit estimates.

Cost-effectiveness

- The median cost per QALY gained was \$15,202 (IQI: \$3,569 to \$34,509), based on 15 estimates from 14 studies. Fourteen of the 15 estimates were below \$50,000.

The median time horizon for included studies was 12 months. This likely was not enough time to capture effects of reduced blood pressure on cost of health care utilization. This is one plausible explanation for the mixed results for net cost and ROI.

The systematic economic review finds team-based care interventions for hypertension control are cost-effective based on a median estimate of \$15,202 per QALY gained, which is below a conservative \$50,000 per QALY threshold.

Considerations for Implementation

The following considerations for implementation are drawn from studies included in the existing evidence review, the broader literature, and expert opinion, as noted below.

Several resources offer guidance on the use and translation of team-based care interventions to control blood pressure.

- The [Surgeon General's Call to Action to Control Hypertension](https://www.hhs.gov/sites/default/files/call-to-action-to-control-hypertension.pdf) [https://www.hhs.gov/sites/default/files/call-to-action-to-control-hypertension.pdf] (2020) provides team-based care strategies to promote and optimize care for blood pressure control.
- The [Best Practices Guide for Cardiovascular Disease Prevention](https://www.cdc.gov/dhdsp/pubs/guides/best-practices/index.htm) [https://www.cdc.gov/dhdsp/pubs/guides/best-practices/index.htm] from CDC's Division of Heart Disease and Stroke Prevention describes and summarizes scientific evidence behind eight effective strategies health care systems can implement with communities to help patients lower blood pressure and cholesterol. The guide is a resource for state and local health departments, decision makers, public health professionals, and others interested in using proven strategies to improve cardiovascular health. Specific information is available on [team-based care](https://www.cdc.gov/dhdsp/pubs/guides/best-practices/team-based-care.htm) [https://www.cdc.gov/dhdsp/pubs/guides/best-practices/team-based-care.htm], its effectiveness, and strategies for implementation.
- The [Hypertension Control Change Package](https://millionhearts.hhs.gov/files/HTN_Change_Package.pdf) [https://millionhearts.hhs.gov/files/HTN_Change_Package.pdf] from Million Hearts® presents a list of process improvements that outpatient clinical settings can implement to promote blood pressure control. It is composed of change concepts, change ideas, and evidence- or practice-based tools and resources.

CPSTF also recommends [team-based care to improve diabetes management for patients with type 2 diabetes](https://www.thecommunityguide.org/findings/diabetes-management-team-based-care-patients-type-2-diabetes) [https://www.thecommunityguide.org/findings/diabetes-management-team-based-care-patients-type-2-diabetes]. Results from that review and meta-analysis of 35 studies found meaningful and significant improvements in both blood glucose control and blood pressure control. While the two team-based care interventions share similar components, a comparison of the summary outcomes suggests patients with both type 2 diabetes and high blood pressure may get more benefit from team-based care organized around diabetes management.

Expanded use of digital health devices and technology could increase patient access to components such as counseling or coaching and improve communication between patients and team members. Programmers using technology-supported communications (e.g., web portals, mobile devices) need to be aware of requirements to protect patient confidentiality (Zamani et al., 2009; Mallen et al., 2005).

Evidence Gaps

CPSTF identified several areas that have limited information. Additional research and evaluation could help answer the following questions and fill remaining gaps in the evidence base.

- Which factors affect sustainability and intensity of team-based care interventions?
- How should these interventions be used by systems of care?
 - Are there differences in the effectiveness and economic efficiency of these interventions when they include all patients with high blood pressure rather than limiting participation to those with uncontrolled blood pressure?
 - How does intervention effectiveness vary based on patients' baseline rates of blood pressure control? At what baseline rate does team-based care become an inefficient intervention for improving blood pressure control in a patient population?
- What are the effects of adding digital interventions and innovative technology-enabled resources to team-based care? Specifically, what are the benefits associated with patients' use of web portals and mobile technology?
- How do costs and reimbursement mechanisms impact the effectiveness of team-based care?

- What are the long-term effects of team-based care on morbidity and mortality outcomes? More studies of longer duration are needed to capture effects.
- Is the intervention cost-effective over 5- to 10-year time horizons?
- What are the economic outcomes for interventions implemented in rural areas?
- How do interventions affect productivity of patients at their worksites?
- What are the development, implementation, and training costs associated with the intervention?

References

Community Preventive Services Task Force. Team-based care to improve blood pressure control. Recommendation of the Community Preventive Services Task Force. *American Journal of Preventive Medicine* 2014;47(1):100–2.

Jacob V, Chattopadhyay SK, Thota AB, Proia KK, Njie G, et al. Economics of team-based care in controlling blood pressure: a community guide systematic review. *American Journal of Preventive Medicine* 2015; 49(5):772-83.

Mallen MJ, Vogel DL, Rochlen AB. The practical aspects of online counseling: ethics, training, technology, and competency. *Counseling Psychologist* 2005;33(6):776-818.

Proia KK, Thota AB, Njie GJ, Finnie RK, Hopkins DP, et al. Team-based care and improved blood pressure control: community guide systematic review. *American Journal of Preventive Medicine* 2014; 47(1):86-99.

U.S. Department of Health and Human Services. The Surgeon General's Call to Action to Control Hypertension. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2020
<https://www.hhs.gov/sites/default/files/call-to-action-to-control-hypertension.pdf>

Zamani Z. Computer technology and counseling. In: *2nd IEEE International Conference on Computer Science and Information Technology*; 2009:488-90.

Disclaimer

The findings and conclusions on this page are those of the Community Preventive Services Task Force and do not necessarily represent those of CDC. CPSTF evidence-based recommendations are not mandates for compliance or spending. Instead, they provide information and options for decision makers and stakeholders to consider when determining which programs, services, and policies best meet the needs, preferences, available resources, and constraints of their constituents.

Document last updated August 4, 2026

Appendices of Supporting Documents

**Heart Disease and Stroke Prevention:
Team-based Care to Improve Blood Pressure Control**

Table of Contents

Appendix A: Analytic Framework (Effectiveness Review)..... 11

Appendix B: Search Strategy (Effectiveness Review) 12

Appendix C: Included Studies (Effectiveness Review) 22

Appendix D: Analytic Framework (Economic Review)..... 27

Appendix E: Search Strategy (Economic Review) 28

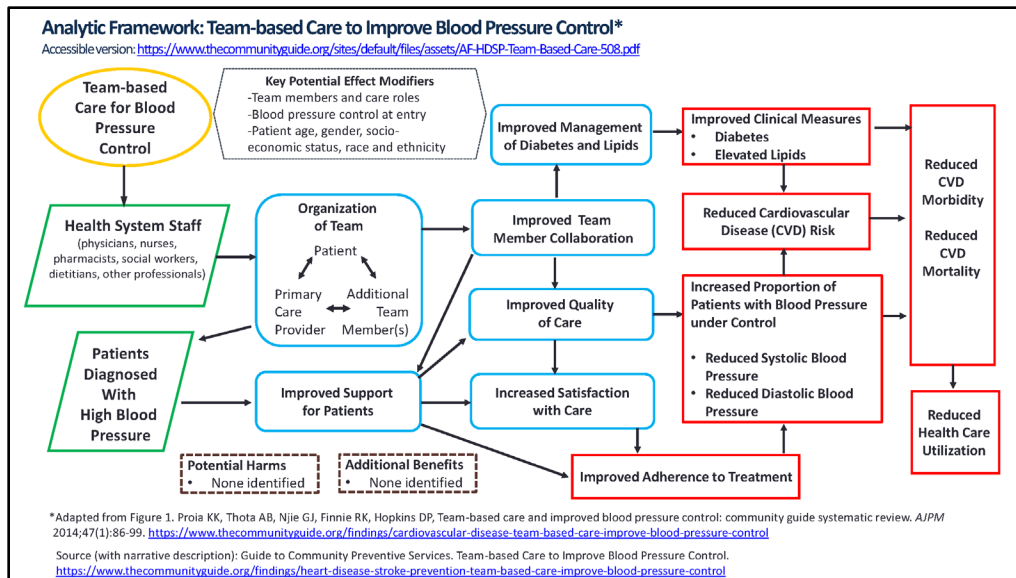
Appendix F: Included Studies (Economic Review)..... 38

Appendix G: Summary Evidence Table (Economic Review)..... 41

Appendix A

Analytic Framework (Effectiveness Review)

Heart Disease and Stroke Prevention: Team-based Care to Improve Blood Pressure Control



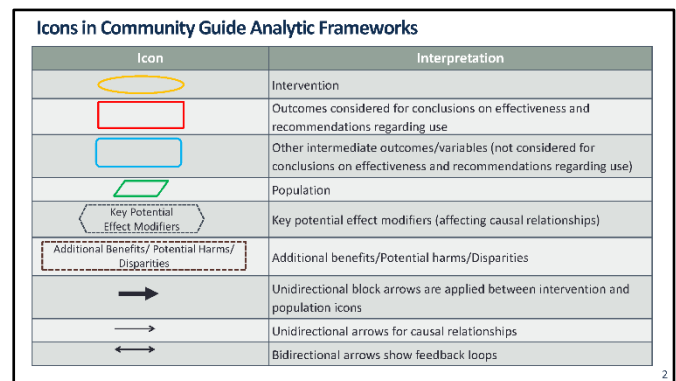
Analytic Framework Text Description

The analytic framework depicts postulated pathways through which team-based care interventions might help patients with high blood pressure achieve and maintain blood pressure control. Interventions incorporate a multi-disciplinary team (e.g., physicians, nurses, pharmacists, social workers, dietitians, other professionals) to improve the quality of blood pressure care for patients.

Team-based care is established by adding new staff or changing the roles of existing staff to work with the patient and primary care provider. Team-based care interventions facilitate improvements in team member collaboration to support the patient in management of their blood pressure and co-morbidities including diabetes and elevated lipids.

In patients diagnosed with high blood pressure, interventions that improve support might also improve patient satisfaction with care, quality of care, and adherence to blood pressure treatments including medications. Ultimately, team-based care interventions can increase the number of patients who have their blood pressure under control, improve clinical measures of control for patients with diabetes or elevated lipids, and reduce overall risk for cardiovascular disease. Improvements in these outcomes might result in reductions in cardiovascular morbidity and mortality which might result in reduced health care utilization. No additional potential benefits, and no potential harms of these interventions were identified.

Key potential effect modifiers include differences in the team members and roles, level of blood pressure control among patients at intervention entry, and patient demographic characteristics (e.g., age, gender, socio-economic status, race, ethnicity).



Appendix B

Search Strategy (Effectiveness Review):

Heart Disease and Stroke Prevention: Team-based Care to Improve Blood Pressure Control

The Community Preventive Services Task Force finding is based on evidence from a systematic review published in 2006 (Walsh et al., search period January 1980-July 2003) and a more recent Community Guide review (search period July 2003-May 2012). In updating the evidence, The Community Guide used the same search strategy that was used for the Walsh 2006 review. The following databases were searched from 1980 up to 2012 to identify studies of team-based care: MEDLINE and the Cochrane Effective Practice and Organization of Care (EPOC) registry.

The same search strategy was used for the period 2012-2019 and again for an update through August 2020.

Medline (Ovid)

- 1 Public Health/
- 2 Emergency Responders/
- 3 1 and 2
- 4 Disaster Planning/
- 5 1 and 4
- 6 Disease Management/
- 7 patient care planning/
- 8 patient-centered care/
- 9 primary health care/
- 10 progressive patient care/
- 11 critical pathways/
- 12 delivery of health care, integrated/
- 13 health services accessibility/
- 14 managed care programs/
- 15 product line management/
- 16 patient care team/
- 17 behavior control/

18 counseling/

19 health promotion/

20 patient compliance/

21 after-hours care/

22 (coordination or coordinated or multifactorial or multicomponent or multidisciplinary or interdisciplinary or integrated or community-based or organized).ti.

23 (care or approach or intervention or strategy or strategies or management or managing or center* or clinic*).ti.

24 22 and 23

25 organization-and-administration/

26 or/6-21

27 24 or 25 or 26

28 total quality management/

29 quality control/

30 (“TQM” or “CQI”).ti.

31 quality.ti.

32 (continous or total).ti.

33 31 and 32 1621

34 (management or improvement).ti.

35 33 and 34

36 28 or 29 or 30 or 35

37 Education, Continuing/

38 education.ti.

39 continuing.ti.

40 38 and 39

41 (medical or professional* or nursing or physician* or nurse*).ti.

42 40 and 41 4561

43 outreach.ti. 2996

44 (visit* or educational).ti.

45 academic.ti.

46 detailing.ti.

47 45 and 46

48 44 or 47

49 37 or 42 or 48

50 diffusion of innovation/

51 diffusion.ti.

52 (innovation or technology).ti.

53 51 and 52

54 50 or 53

55 Medical audit/

56 (audit or feedback or compliance or adherence or training).ti.

57 (improvement* or improving or improves or improve or guideline* or practice* or medical or provider* or physician* or nurse* or clinician* or academic or visit*).ti.

58 practice guidelines/

59 57 or 58

60 56 and 58

61 (financial or economic or physician*).ti.

62 Patient*.mp.

63 61 or 62

64 incentive*.ti.

65 63 and 64

66 reminder systems/

67 reminder.ti.

68 reimbursement mechanisms/

69 55 or 60 or 65 or 66 or 67 or 68

70 medical informatics/ or internet/ or telemedicine/ or telephone/ or (computer* or " decision support" or telemedicine or telecommunication* or modem or (mobile adj2 phone) or (cell adj2 phone) or telephone*).ti.

71 27 or 36 or 49 or 54 or 69 or 70

72 Hypertension/

73 (hypertension or (blood adj2 pressure)).ti.

74 72 or 73

75 71 and 74

76 meta-analysis.pt. or meta-analysis.tw.

77 (review or guideline).pt. or (consensus or guideline* or literature or overview or review).ti. or decision support techniques/

78 (cochrane or medline or cinahl).tw.

79 "national library".tw.

80 (handsearch* or search* or searching).tw.

81 (hand or manual or electronic or bibliograph*).tw. or database*.mp.

82 (synthesis or overview or review or survey).ti.

83 (systematic or critical or methodologic or quantitative or qualitative or literature or evidence or evidence-based).ti.

84 76 or 77

85 78 or 79

86 84 and 85

87 82 and 83

88 78 or 79 or 81

89 80 and 88

90 77 and 85

91 76 or 87 or 89 or 90

92 76 or 86 or 87 or 89

93 91 or 92

94 case report/

95 (case* or report).ti.

96 (editorial or comment or letter).pt.

97 94 or 95 or 96

98 93 not 97

99 (randomized or randomised or controlled or intervention* or evaluation* or impact* or effective* or study or studies or comparative feasibility or program* or design*).ti.

100 (clinical trial or randomized controlled trial).pt. or epidemiologic studies/ or evaluation studies/ or comparative study/ or feasibility studies/ or intervention studies/ or program evaluation/ or epidemiologic research design/

101 99 or 100

102 98 or 101

103 75 and 102

104 exp Animals/

105 exp Humans/

106 104 not 105

107 103 not 106

108 limit 107 to (english language and yr="2012 – 2019") 1571

109 (201908* or 201909* or 201910* or 201911* or 201912* or 2020*).ed.

110 107 and 109 248

111 limit 110 to (abstracts and english language)

112 limit 110 to english language

Cochrane

ID Search Hits

#1 MeSH descriptor: [Patient Care Planning] this term only

#2 MeSH descriptor: [Disease Management] this term only

#3 MeSH descriptor: [Patient-Centered Care] this term only

#4 MeSH descriptor: [Primary Health Care] this term only

#5 MeSH descriptor: [Progressive Patient Care] this term only

#6 MeSH descriptor: [Critical Pathways] this term only

#7 MeSH descriptor: [Delivery of Health Care, Integrated] this term only

#8 MeSH descriptor: [Health Services Accessibility] this term only

#9 MeSH descriptor: [Managed Care Programs] this term only

#10 MeSH descriptor: [Patient Care Team] this term only

#11 MeSH descriptor: [Behavior Control] this term only

#12 MeSH descriptor: [Counseling] this term only

#13 MeSH descriptor: [Health Promotion] this term only

#14 MeSH descriptor: [Patient Compliance] this term only

#15 MeSH descriptor: [After-Hours Care] this term only

#16 (coordination or coordinated or multifactorial or multicomponent or multidisciplinary or interdisciplinary or integrated or community-based or organized):ti

#17 (care or approach or intervention or strategy or strategies or management or managing or center* or clinic*):ti

#18 #16 AND #17

#19 MeSH descriptor: [Organization and Administration] this term only

#20 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 25682

#21 #18 OR #19 OR #20

#22 MeSH descriptor: [Total Quality Management] this term only

#23 MeSH descriptor: [Quality Control] this term only

#24 ("TQM" OR "CQI"):ti

#25 quality:ti

#26 (continuous OR total):ti

#27 #25 AND #26

#28 (management OR improvement):ti

#29 #27 AND #28

#30 #22 OR #23 OR #24 OR #29

#31 MeSH descriptor: [Education, Continuing] this term only

#32 (education):ti

#33 (continuing):ti

#34 #32 AND #33

#35 (medical OR professional* OR nursing OR physician* OR nurse*):ti

#36 #34 AND #35

#37 outreach:ti

#38 (visit* OR educational):ti

#39 academic:ti 7

#40 detailing:ti

#41 #39 AND #40

#42 #38 OR #41

#43 #31 OR #36 OR #42

#44 MeSH descriptor: [Diffusion of Innovation] this term only

#45 diffusion:ti

#46 (innovation or technology):ti

#47 #45 AND #46

#48 #44 OR #47

#49 MeSH descriptor: [Medical Audit] this term only 221

#50 (audit or feedback or compliance or adherence or training):ti

#51 (improvement* or improving or improves or improve or guideline* or practice* or medical or provider* or physician* or nurse* or clinician* or academic or visit*):ti

#52 MeSH descriptor: [Practice Guidelines as Topic] this term only

#53 #51 OR #52

#54 #50 AND #53

#55 (financial or economic or physician*):ti

#56 (patient*):ti,ab,kw

#57 #55 OR #56

#58 (incentive*):ti (Word variations have been searched)

#59 #57 AND #58

#60 MeSH descriptor: [Reminder Systems] this term only

#61 reminder:ti

#62 MeSH descriptor: [Reimbursement Mechanisms] this term only

#63 #49 OR #54 OR #59 OR #60 OR #61 OR #62

#64 MeSH descriptor: [Medical Informatics] this term only

#65 MeSH descriptor: [Internet] this term only

#66 MeSH descriptor: [Telemedicine] this term only

#67 MeSH descriptor: [Telephone] this term only

#68 #64 OR #65 OR #66 OR #67

#69 (computer* OR "decision support" OR telemedicine OR telecommunication* OR modem OR (mobile NEAR/2 phone) OR (cell NEAR/2 phone) OR telephone*):ti

#70 #21 OR #30 OR #43 OR #48 OR #63 OR #68 OR #69

#71 MeSH descriptor: [Hypertension] this term only

#72 MeSH descriptor: [Blood Pressure] this term only

#73 (hypertension OR (blood NEAR/2 pressure)):ti

#74 #71 OR #72 OR #73

#75 #70 AND #74

#76 meta-analysis:ti,ab,kw,pt

#77 (review or guideline):pt

#78 (consensus or guideline* or literature or overview or review):ti

#79 MeSH descriptor: [Decision Support Techniques] this term only

#80 #77 or #78 or #79

#81 ((medline or cinahl):ti,ab, kw) (Word variations have been searched)

#82 ("national library":ti,ab,kw) (Word variations have been searched)

#83 (handsearch* or search* or searching):ti,ab,kw 1

#84 (hand or manual or electronic or bibliograph* OR database*):ti,ab,kw

#85 (synthesis or overview or review or survey):ti

#86 (systematic or critical or methodologic or quantitative or qualitative or literature or evidence or evidence-based):ti

#87 #76 OR #80

#88 #81 OR #82

#89 #87 and #88

#90 #85 and #86

#91 #81 or #82 or #84

#92 #83 and #91

#93 #80 and #88

#94 #76 or #90 or #92 or #93

#95 #76 or #89 or #90 or #92

#96 #94 or #95

#97 ((case* OR report):ti)

#98 ((editorial OR comment OR letter)):pt 12326

#99 #97 OR #98

#100 #96 NOT #99

#101 ((randomized or randomised or controlled or intervention* or evaluation* or impact* or effective* or study or studies or comparative feasibility or program* or design*)):ti

#102 ((clinical trial or randomized controlled trial)):pt (Word variations have been searched)

#103 MeSH descriptor: [Epidemiologic Studies] this term only

#104 MeSH descriptor: [Evaluation Study] this term only

#105 MeSH descriptor: [Comparative Study] this term only

#106 MeSH descriptor: [Feasibility Studies] this term only

#107 MeSH descriptor: [Program Evaluation] this term only

#108 MeSH descriptor: [Epidemiologic Research Design] this term only

#109 MeSH descriptor: [Clinical Trial] this term only

#110 #102 OR #103 OR #104 OR #105 OR #106 OR #107 OR #108 OR #109

#111 #101 OR #110

#112 #100 OR #111

#113 #75 AND #112 with Publication Year from 2012 to 2019, in Trials (Word variations have been searched)

#114 #75 AND #112 with Cochrane Library publication date Between Jan 2012 and Aug 2019, in Cochrane Reviews

#115 #75 AND #112

#116 #115 AND (“2019, Issue 8” OR “2019, Issue 9” OR “2019, Issue 10” OR “2019, Issue 11” OR “2019, Issue 12”
)

#117 #115 with Cochrane Library publication date Between Jan 2020 and Jul 2020, in Cochrane Reviews, Trials

#118 #116 OR #117

Appendix C
Included Studies (Effectiveness Review):
Heart Disease and Stroke Prevention:
Team-based Care to Improve Blood Pressure Control

The number of studies and publications do not always correspond (e.g., a publication may include several studies or one study may be explained in several publications).

Following are studies that evaluated team-based care interventions for blood pressure control included in the updated Community Guide review (search period January 2012-June 2020).

Adair R, Christianson J, Wholey DR, White K, Town R, et al. Care guides-employing nonclinical laypersons to help primary care teams manage chronic disease. *J Ambulatory Care Manage* 2012;35(1):27-37.

Adair R, Wholey DR, Christianson J, White KM, Britt H, et al. Improving chronic disease care by adding laypersons to the primary care team: a parallel randomized trial. *Annals of Internal Medicine* 2013;159:176-84.

Ashburner JM, Horn DM, O'Keefe SM, Zai AH, Chang Y, et al. Chronic disease outcomes from primary care population health program implementation. *American Journal of Managed Care* 2017; 23:728-35.

Benson GA, Sidebottom A, Sillah A, Boucher JL, Miedema MD, et al. Reach and effectiveness of the HeartBeat Connections telemedicine pilot program. *Journal of Telemedicine & Telecar* 2018;24:216-23.

Bosworth HB, Olsen MK, McCant F, Stechuchak KM, Danus S, et al. Telemedicine cardiovascular risk reduction in veterans: The CITIES trial. *American Heart Journal* 2018;199:122-9.

Buhse S, Kuniss N, Liethmann K, Müller UA, Lehmann T, et al. Informed shared decision-making programme for patients with type 2 diabetes in primary care: cluster randomised controlled trial. *BMJ Open* 2018;8:e024004.

Bui-Duy MK, Wong S, Lam R, Karliner LS. Development of a multistep hypertension quality improvement program in an academic general medicine practice. *J Healthc Qual* 2019;41(3):172-9.

Carter BL, Coffey CS, Ardery G, Uribe L, Ecklund D, et al. Cluster-randomized trial of a physician/pharmacist collaborative model to improve blood pressure control. *Circ Cardiovasc Qual Outcomes* 2015; 8:235-43.

Carter BL, Vander Weg MW, Parker CP, Goedken CC, Richardson KK, et al. Sustained blood pressure control following discontinuation of a pharmacist intervention for veterans. *Journal of Clinical Hypertension* 2015;17:701-8.

Choudhry NK, Isaac T, Lauffenburger JC, Gopalakrishnan C, Lee M, et al. Effect of a remotely delivered tailored multicomponent approach to enhance medication taking for patients with hyperlipidemia, hypertension, and diabetes: the STIC2IT cluster randomized clinical trial. *JAMA Intern Med* 2018;. 178:1182-9.

Chuang E, Ganti V, Alvi A, Yandrapu H, Dalal M. Implementing panel management for hypertension in a low-income, urban, primary care setting. *Journal of Primary Care & Community Health* 2014;5:61-6.

Crowley MJ, Powers BJ, Olsen MK, Grubber JM, Koropchak C, et al. The Cholesterol, Hypertension, And Glucose Education (CHANGE) study: results from a randomized controlled trial in African Americans with diabetes. *American Heart Journal* 2013;166:179-86.

Dean SC, Kerry SM, Khong TK, Kerry SR, Oakeshott P. Evaluation of a specialist nurse-led hypertension clinic with consultant backup in two inner city general practices: randomized controlled trial. *Family Practice* 2014;31:172-9.

Fisher NDL, Fera LE, Dunning JR, Desai S, Matta L, et al. Development of an entirely remote, non-physician led hypertension management program. *Clinical Cardiology* 2019;42:285-91.

Fontil V, Gupta R, Moise N, Chen E, Guzman D, et al. Adapting and evaluating a health system intervention from Kaiser Permanente to improve hypertension management and control in a large network of safety-net clinics. *Circulation. Cardiovascular Quality & Outcomes* 2018; 11:e004386.

Fortuna RJ, Nagel AK, Rose E, McCann R, Teeters JC, et al. Effectiveness of a multidisciplinary intervention to improve hypertension control in an urban underserved practice. *Journal of the American Society of Hypertension* 2015;9:966-74.

Frei A, Senn O, Chmiel C, Reissner J, Held U, et al. Implementation of the chronic care model in small medical practices improves cardiovascular risk but not glycemic control. *Diabetes Care* 2014;37:1039-47.

Green BB, Anderson ML, Ralston JD, Catz SL, Cook AJ. Blood pressure 1 year after completion of web-based pharmacist care. *JAMA Intern Med* 2013;173(13):1250-2.

Green, BB, Anderson ML, Cook AJ, Catz S, Fishman PA, et al. e-Care for heart wellness: a feasibility trial to decrease blood pressure and cardiovascular risk. *American Journal of Preventive Medicine* 2014. 46:368-77.

Hebert PL, Sisk JE, Tuzzio L, Casabianca JM, Pogue VA, et al. Nurse-led disease management for hypertension control in a diverse urban community: a randomized trial. *Journal of General Internal Medicine* 2011;27(6):630-9.

Heisler M, Hofer TP, Schmittdiel JA, Selby JV, Klamerus ML, et al. Improving blood pressure control through a clinical pharmacist outreach program in patients with diabetes mellitus in 2 high-performing health systems: the adherence and intensification of medications cluster randomized, controlled pragmatic trial. *Circulation* 2012;125:2863-72.

Heisler M, Hofer TP, Schmittdiel JA, Selby JV, Klamerus ML, et al. Improving blood pressure control through a clinical pharmacist outreach program in patients with diabetes mellitus in 2 high-performing health systems. *Circulation* 2012;125(23):2863-72.

Hirsch JD, Steers N, Adler DS, Kuo GM, Morello CM, et al. Primary care-based, pharmacist-physician collaborative medication-therapy management of hypertension: a randomized, pragmatic trial. *Clinical Therapeutics* 2014;36:1244-54.

Jacobs M, Sherry PS, Taylor LM, Amato M, Tataronis GR, et al. Pharmacist Assisted Medication Program Enhancing the Regulation of Diabetes (PAMPERED) study. *Journal of the American Pharmacists Association* 2012;52:613-21.

Jaffe MG, Lee GA, Young JD, Sidney S, Go AS. Improved blood pressure control associated with a large-scale hypertension program. *JAMA* 2013;310(7):699-705.

Katon W, Russo J, Lin EH, Schmittdiel J, Ciechanowski P, et al. Cost-effectiveness of a multicondition collaborative care intervention: a randomized controlled trial. *Archives of General Psychiatry* 2012. 69:506-14.

Lee CH, Chang BY. Effect of disease improvement with self-measurement compliance (measurement frequency level) in SmartCare Hypertension Management Service. *Telemedicine Journal & E-Health* 2016;22:238-45.

Lindin M, Hellenius ML, Rydell-Karlsson M, Ekblom-Bak E. Long-term effects on cardiovascular risk of a structured multidisciplinary lifestyle program in clinical practice. *BMC Cardiovascular Disorders* 2018;18(59).

Lv N, Xiao L, Simmons ML, Rosas LG, Chan A, et al. Personalized hypertension management using patient-generated health data integrated with electronic health records (EMPOWER-H): six-month pre-post study. *Journal of Medical Internet Research* 2017;19:e311.

Maciejewski, ML, Bosworth HB, Olsen MK, Smith VA, Edelman D, et al. Do the benefits of participation in a hypertension self-management trial persist after patients resume usual care? *Circulation. Cardiovascular Quality & Outcomes* 2014;7:269-75.

Magid DJ, Olson KL, Billups SJ, Wagner NM, Lyons EE, et al. A pharmacist-led, American Heart Association Heart360 Web-enabled home blood pressure monitoring program. *Circulation. Cardiovascular Quality & Outcomes* 2013;6:157-63.

Margolis KL, Asche SE, Bergdall AR, Dehmer SP, Groen SE, et al. Effect of home blood pressure telemonitoring and pharmacist management on blood pressure control: a cluster randomized clinical trial. *JAMA* 2013;310:46-56.

Margolis KL, Asche SE, Dehmer SP, Bergdall AR, Green BB, et al. Long-term outcomes of the effects of home blood pressure telemonitoring and pharmacist management on blood pressure among adults with uncontrolled hypertension: follow-up of a cluster randomized clinical trial. *JAMA Network Open* 2018;1:e181617.

Margolius D, Bodenheimer T, Bennett H, Wong J, Ngo V, et al. Health coaching to improve hypertension treatment in a low-income, minority population. *Annals of Family Medicine* 2012;10:199-205.

Persell SD, Karmali KN, Lazar D, Friesema EM, Lee JY, et al. Effect of electronic health record-based medication support and nurse-led medication therapy management on hypertension and medication self-management: a randomized clinical trial. *JAMA Internal Medicine* 2018;178:1069-77.

Resnick HE, Ilagan PR, Kaylor MB, Mehling D, Alwan M. TEAhM-Technologies for Enhancing Access to Health Management: a pilot study of community-based telehealth. *Telemedicine Journal & E-Health* 2012;18:166-74.

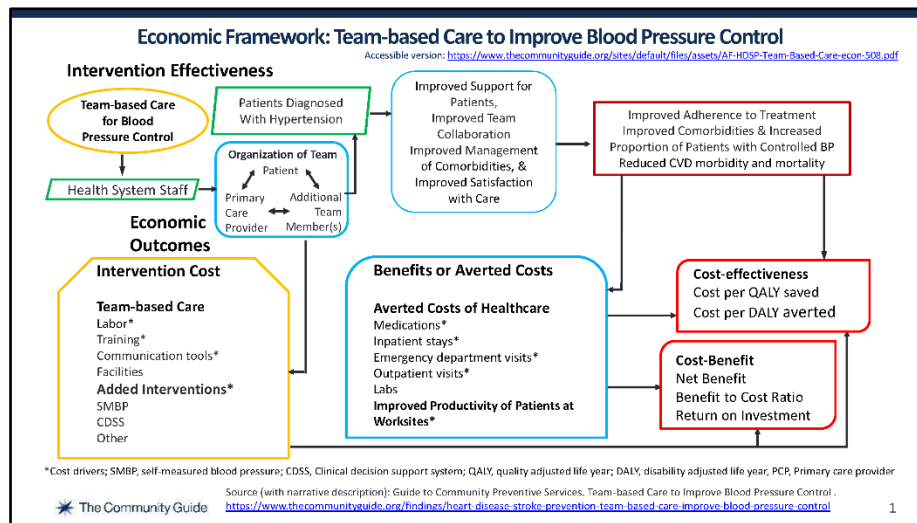
Safai N, Carstensen B, Vestergaard H, Ridderstrøm M. Impact of a multifactorial treatment programme on clinical outcomes and cardiovascular risk estimates: a retrospective cohort study from a specialized diabetes treatment centre in Denmark. *BMJ Open* 2018;8:e019214.

- Sahakyan Y, Abrahamyan L, Shahid N, Stanimirovic A, Pechlivanoglou P, et al. Changes in blood pressure among patients in the Ontario Telehomecare programme: an observational longitudinal cohort study. *Journal of Telemedicine & Telecare* 2018;24:420-7.
- Salisbury C, O’Cathain A, Thomas C, Edwards L, Gaunt D, et al. Telehealth for patients at high risk of cardiovascular disease: pragmatic randomised controlled trial. *BMJ* 2016;353:i2647.
- Scherpbier-de Haan ND, Vervoort GM, van Weel C, Braspenning JC, Mulder J, et al. Effect of shared care on blood pressure in patients with chronic kidney disease: a cluster randomised controlled trial. *British Journal of General Practice* 2013;63:e798-806.
- Schwartz MD, Jensen A, Wang B, Bennett K, Dembitzer A, et al. Panel management to improve smoking and hypertension outcomes by VA primary care teams: a cluster-randomized controlled trial. *Journal of General Internal Medicine* 2015;30:916-23.
- Sisson EM, Dixon DL, Kildow DC, Van Tassell BW, Carl DE, et al. Effectiveness of a pharmacist-physician team-based collaboration to improve long-term blood pressure control at an inner-city safety-net clinic. *Pharmacotherapy: The Journal of Human Pharmacology & Drug Therapy* 2016;36:342-7.
- Svarstad BL, Kotchen JM, Shireman TI, Brown RL, Crawford SY, et al. Improving refill adherence and hypertension control in black patients: Wisconsin TEAM trial. *Journal of the American Pharmacists Association* 2013;53:520-9.
- Thomas KL, Shah BR, Elliot-Bynum S, Thomas KD, Damon K, et al. Check It, Change It: A community-based, multifaceted intervention to improve blood pressure control. *Circ Cardiovasc Qual Outcomes* 2014;7:828-34.
- Tilton JJ, Edakkunnathu MG, Moran KM, Markel Vaysman A, DaPisa JL, et al. Impact of a medication therapy management clinic on glycosylated hemoglobin, blood pressure, and resource utilization. *Annals of Pharmacotherapy* 2019;53:13-20.
- van den Berg N, Meinke-Franze C, Fiss T, Hoffmann W. Changes in blood pressure in patients with hypertension in the context of delegated GP-home visits: a prospective implementation study. *Blood Pressure Monitoring* 2013;18:63-71.
- Victor RG, Lynch K, Li N, Blyler C, Muhammad E, et al. A cluster-randomized trial of blood-pressure reduction in black barbershops. *New England Journal of Medicine* 2018;378:1291-1301.
- Willard-Grace R, Chen EH, Hessler D, DeVore D, Prado C, et al. Health coaching by medical assistants to improve control of diabetes, hypertension, and hyperlipidemia in low-income patients: a randomized controlled trial. *Annals of Family Medicine* 2015;13:130-8.
- Yip BH, Lee EK, Sit RW, Wong C, Li X, et al. Nurse-led repeat prescription for patients with controlled hypertension: a randomised controlled trial. *Hong Kong Medical Journal* 2018;24 Suppl 4:4-7.
- Yu EY, Wan EY, Wong CK, Chan AK, Chan KH, et al. Effects of risk assessment and management programme for hypertension on clinical outcomes and cardiovascular disease risks after 12 months: a population-based matched cohort study. *Journal of Hypertension* 2017;35:627-36.

Zillich AJ, Jaynes HA, Bex SD, Boldt AS, Walston CM, et al. Evaluation of pharmacist care for hypertension in the Veterans Affairs patient-centered medical home: a retrospective case-control study. *American Journal of Medicine* 2015;128:539.e.

Appendix D

Analytic Framework (Economic Review) Heart Disease and Stroke Prevention: Team-based Care to Improve Blood Pressure Control



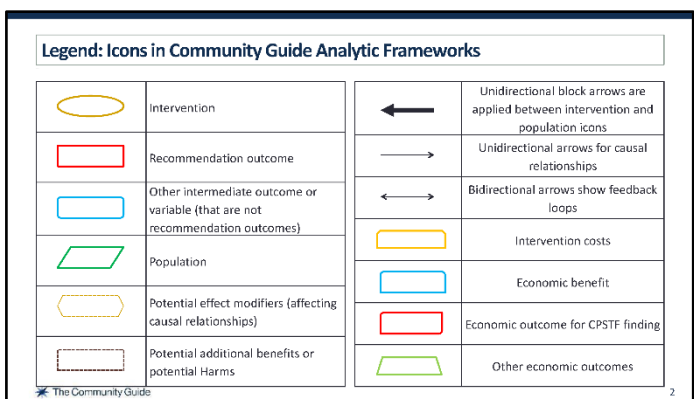
Analytic Framework Text Description

The analytic framework postulates that team-based care interventions for patients diagnosed with high blood pressure facilitate team member collaboration and support patients in care for their high blood pressure and co-morbidities. The collaborative care and patient support might improve adherence to treatment and improve blood pressure control and co-morbidities, thereby reducing cardiovascular disease (CVD) morbidity and mortality.

The economic review identified the cost of labor, training and materials, and communication tools to be drivers of intervention cost along with any additional interventions such as self-measured blood pressure monitoring, clinical decision support systems, or others that may be added to the team-based care intervention. The cost of facilities was also identified as a component of intervention costs, though it was not considered a driver.

The economic review postulates that interventions would lead to economic benefits or averted costs. Reduction in blood pressure would decrease use of healthcare resources, with drivers of healthcare cost being medications, inpatient stays, emergency department visits, and outpatient visits. The cost of labs was also identified as a component of healthcare cost but it was not considered a driver. Reduced morbidity and mortality related to CVD are expected to increase the productivity of patients at their worksites.

The expectations are that team-based care will reduce CVD risk factors and prevent cardiovascular disease and events, reduce healthcare cost, increase productivity of patients at their worksites, increase both quantity and quality of life years lived, and avert disability adjusted life years. The framework conceptualizes summary economic outcomes as cost-effectiveness, cost-benefit, or return on investment. Cost-effectiveness is net cost per additional quality adjusted life year saved or disability-adjusted lifeyear averted. Cost-benefit is the ratio of averted healthcare cost and increased productivity to the intervention cost. Return on investment is the ratio of the difference in averted healthcare cost and intervention cost to intervention cost.



Appendix E Search Strategy (Economic Review):

Heart Disease and Stroke Prevention: Team-based Care to Improve Blood Pressure Control

A research librarian searched for published studies in the following databases: Medline, CINAHL, EconLit, Cochrane. Additional studies were identified via suggestions from subject matter experts and hand-searches from reference lists. Studies searched and screened for inclusion were published in English from January 2011 through January 2021 and were limited to countries with high income economies as defined by the World Bank.

Search terms and strategies were adjusted to each database, based on controlled and uncontrolled vocabularies and search software.

Medline

1 exp Hypertension/ or (hypertens* or ((essential or isolate*) adj3 hypertension) or ((elevat* or high or increase*) adj3 (blood adj pressur*))).ti,ab.

2 exp “costs and cost analysis”/ or exp health care costs/ or exp “cost of illness”/ or *economics/

3 exp Quality-Adjusted Life Years/ or (benefit or cost\$ or expenditure\$ or Life years or “disability adjusted life years” or effectiveness or qaly*).tw.

4 2 and 3

5 exp cost-benefit analysis/ or Health care costs/

6 ((cost-effectiveness adj3 analysis) or (cost-utility adj3 analysis) or (economic adj3 evaluation) or “cost effective” or health care cost* or (cost-benefit adj3 analysis)).tw.

7 4 or 5 or 6

8 1 and 7

9 (afghanistan or albania or algeria or american samoa or angola or “antigua and barbuda” or antigua or barbuda or armenia or armenian or aruba or azerbaijan or bahrain or bangladesh or barbados or republic of belarus or belarus or byelarus or belorussia or byelorussian or belize or british honduras or benin or dahomey or bhutan or bolivia or “bosnia and herzegovina” or bosnia or herzegovina or botswana or bechuanaland or brazil or brasil or bulgaria or burkina faso or burkina fasso or upper volta or burundi or urundi or cabo verde or cape verde or cambodia or kampuchea or khmer republic or cameroon or cameron or cameroun or central african republic or ubangi shari or chad or colombia or comoros or comoro islands or iles comores or mayotte or democratic republic of the congo or democratic republic congo or congo or zaire or costa rica or “cote d’ivoire” or “cote d’ivoire” or cote divoire or cote d ivoire or ivory coast or croatia or cuba or cyprus or czech republic or czechoslovakia or djibouti or french somaliland or dominica or dominican republic or ecuador or egypt or united arab republic or el salvador or equatorial guinea or spanish guinea or eritrea or estonia or eswatini or swaziland or ethiopia or fiji or gabon or gabonese republic or gambia or “georgia (republic)” or georgian or ghana or gold coast or gibraltar or greece or grenada or guam or guatemala or guinea or guinea bissau or guyana or british guiana or haiti or hispaniola or honduras or hungary or india or indonesia or timor or iran or iraq or isle of man or jamaica or jordan or kazakhstan or kazakh or kenya or “democratic people’s republic of korea” or republic of

korea or north korea or south korea or korea or kosovo or kyrgyzstan or kirghizia or kirgizstan or kyrgyz republic or kirghiz or laos or lao pdr or "lao people's democratic republic" or latvia or lebanon or lebanese republic or lesotho or basutoland or liberia or libya or libyan arab jamahiriya or lithuania or macau or macao or republic of north macedonia or macedonia or madagascar or malagasy republic or malawi or nyasaland or malaysia or malay federation or malaya federation or maldives or indian ocean islands or indian ocean or mali or malta or micronesia or federated states of micronesia or kiribati or marshall islands or nauru or northern mariana islands or palau or tuvalu or mauritania or mauritius or mexico or moldova or moldovian or mongolia or montenegro or morocco or ifni or mozambique or portuguese east africa or myanmar or burma or namibia or nepal or netherlands antilles or nicaragua or niger or nigeria or oman or muscat or pakistan or panama or papua new guinea or new guinea or paraguay or peru or philippines or philipines or phillipines or phillippines or poland or "polish people's republic" or portugal or portuguese republic or romania or russia or russian federation or ussr or soviet union or union of soviet socialist republics or rwanda or ruanda or samoa or pacific islands or polynesia or samoan islands or navigator island or navigator islands or "sao tome and principe" or saudi arabia or senegal or serbia or seychelles or sierra leone or slovakia or slovak republic or slovenia or melanesia or solomon island or solomon islands or norfolk island or norfolk islands or somalia or south africa or south sudan or sri lanka or ceylon or "saint kitts and nevis" or "st. kitts and nevis" or saint lucia or "st. lucia" or "saint vincent and the grenadines" or saint vincent or "st. vincent" or grenadines or sudan or suriname or surinam or dutch guiana or netherlands guiana or syria or syrian arab republic or tajikistan or tadjikistan or tadjhikistan or tadjhik or tanzania or tanganyika or thailand or siam or timor leste or east timor or togo or togolese republic or tonga or "trinidad and tobago" or trinidad or tobago or tunisia or turkey or turkmenistan or turkmen or uganda or ukraine or uzbekistan or uzbek or vanuatu or new hebrides or venezuela or vietnam or viet nam or middle east or west bank or gaza or palestine or yemen or yugoslavia or zambia or zimbabwe or northern rhodesia or global south or africa south of the sahara or sub-saharan africa or subsaharan africa or africa, central or central africa or africa, northern or north africa or northern africa or magreb or maghrib or sahara or africa, southern or southern africa or africa, eastern or east africa or eastern africa or africa, western or west africa or western africa or west indies or indian ocean islands or caribbean or central america or latin america or "south and central america" or south america or asia, central or central asia or asia, northern or north asia or northern asia or asia, southeastern or southeastern asia or south eastern asia or southeast asia or south east asia or asia, western or western asia or europe, eastern or east europe or eastern europe or developing country or developing countries or developing nation? or developing population? or developing world or less developed countr* or less developed nation? or less developed population? or less developed world or lesser developed countr* or lesser developed nation? or lesser developed population? or lesser developed world or under developed countr* or under developed nation? or under developed population? or under developed world or underdeveloped countr* or underdeveloped nation? or underdeveloped population? or underdeveloped world or middle income countr* or middle income nation? or middle income population? or low income countr* or low income nation? or low income population? or lower income countr* or lower income nation? or lower income population? or underserved countr* or underserved nation? or underserved population? or underserved world or under served countr* or under served nation? or under served population? or under served world or deprived countr* or deprived nation? or deprived population? or deprived world or poor countr* or poor nation? or poor population? or poor world or poorer countr* or poorer nation? or poorer population? or poorer world or developing econom* or less developed econom* or lesser developed econom* or under developed econom* or underdeveloped econom* or middle income econom* or low income econom* or lower income econom* or low gdp or low gnp or low gross domestic or low gross national or lower gdp or lower gnp or lower gross domestic or lower gross national or lmic or lmics or third world or lami countr* or transitional countr* or emerging economies or emerging nation?).ti,ab,sh,kf.

10 8 not 9

11 limit 10 to (abstracts and english language and yr="2011 -Current")

CINAHL

S1 (MH “Costs and Cost Analysis+”) or (MH “Health Care Costs+”) or (MH “Economic Aspects of Illness”) or (MM “Economics”))

S2 TI ((benefit or cost* or expenditure* or Life years OR disability adjusted life years or effectiveness or qaly*))
OR AB ((benefit or cost* or expenditure* or Life years OR disability adjusted life years or effectiveness or qaly*))

S3 (MH “Quality-Adjusted Life Years”)

S4 S2 OR S3

S5 S1 AND S4

S6 MH Cost Benefit Analysis

S7 TI (cost-effectiveness analysis or cost-utility analysis or economic evaluation or cost effective or health care cost* OR cost-benefit analysis) OR AB (cost-effectiveness analysis or cost-utility analysis or economic evaluation or cost effective or health care cost* OR cost-benefit analysis)

S8 S6 OR S7

S9 S5 OR S8

S10 (MH “Hypertension+”)

S11 TI ((hypertens* or ((essential or isolate*) N3 hypertension) or ((elevat* or high or increase*) N3 (blood adj pressur*)))) OR AB ((hypertens* or ((essential or isolate*) N3 hypertension) or ((elevat* or high or increase*) N3 (blood adj pressur*))))

S12 S10 OR S11

S13 S9 AND S12

S14 TI ((afghanistan or albania or algeria or american samoa or angola or “antigua and barbuda” or antigua or barbuda or armenia or armenian or aruba or azerbaijan or bahrain or bangladesh or barbados or republic of belarus or belarus or byelarus or belorussia or byelorussian or belize or british honduras or benin or dahomey or bhutan or bolivia or “bosnia and herzegovina” or bosnia or herzegovina or botswana or bechuanaland or brazil or brasil or bulgaria or burkina faso or burkina fasso or upper volta or burundi or urundi or cabo verde or cape verde or cambodia or kampuchea or khmer republic or cameroon or cameron or cameroun or central african republic or ubangi shari or chad or colombia or comoros or comoro islands or iles comores or mayotte or democratic republic of the congo or democratic republic congo or congo or zaire or costa rica or “cote d’ivoire” or “cote d’ivoire” or cote divoire or cote d ivoire or ivory coast or croatia or cuba or cyprus or czech republic or czechoslovakia or djibouti or french somaliland or dominica or dominican republic or ecuador or egypt or united arab republic or el salvador or equatorial guinea or spanish guinea or eritrea or estonia or eswatini or swaziland or ethiopia or fiji or gabon or gabonese republic or gambia or “georgia (republic)” or georgian or ghana or gold coast or gibraltar or greece or grenada or guam or guatemala or guinea or guinea bissau or guyana or british guiana or haiti or hispaniola or honduras or hungary or india or indonesia or timor or iran or iraq or isle of man or jamaica or jordan or kazakhstan or kazakh or kenya or “democratic people’s republic of korea” or republic of korea or north korea or south korea or korea or kosovo or kyrgyzstan or kirghizia or kirgizstan or kyrgyz republic or kirghiz or laos or lao pdr or “lao people’s democratic republic” or latvia or lebanon or lebanese republic or lesotho or basutoland or liberia or libya or libyan arab jamahiriya or lithuania or macau or macao or republic of

north macedonia or macedonia or madagascar or malagasy republic or malawi or nyasaland or malaysia or malay federation or malaya federation or maldives or indian ocean islands or indian ocean or mali or malta or micronesia or federated states of micronesia or kiribati or marshall islands or nauru or northern mariana islands or palau or tuvalu or mauritania or mauritius or mexico or moldova or moldovian or mongolia or montenegro or morocco or ifni or mozambique or portuguese east africa or myanmar or burma or namibia or nepal or netherlands antilles or nicaragua or niger or nigeria or oman or muscat or pakistan or panama or papua new guinea or new guinea or paraguay or peru or philippines or philipines or philippines or philippines or poland or "polish people's republic" or portugal or portuguese republic or romania or russia or russian federation or ussr or soviet union or union of soviet socialist republics or rwanda or ruanda or samoa or pacific islands or polynesia or samoan islands or navigator island or navigator islands or "sao tome and principe" or saudi arabia or senegal or serbia or seychelles or sierra leone or slovakia or slovak republic or slovenia or melanesia or solomon island or solomon islands or norfolk island or norfolk islands or somalia or south africa or south sudan or sri lanka or ceylon or "saint kitts and nevis" or "st. kitts and nevis" or saint lucia or "st. lucia" or "saint vincent and the grenadines" or saint vincent or "st. vincent" or grenadines or sudan or suriname or surinam or dutch guiana or netherlands guiana or syria or syrian arab republic or tajikistan or tadjikistan or tadzhikistan or tadzhik or tanzania or tanganyika or thailand or siam or timor leste or east timor or togo or togolese republic or tonga or "trinidad and tobago" or trinidad or tobago or tunisia or turkey or turkmenistan or turkmen or uganda or ukraine or uzbekistan or uzbek or vanuatu or new hebrides or venezuela or vietnam or viet nam or middle east or west bank or gaza or palestine or yemen or yugoslavia or zambia or zimbabwe or northern rhodesia or global south or africa south of the sahara or sub-saharan africa or subsaharan africa or africa, central or central africa or africa, northern or north africa or northern africa or magreb or maghrib or sahara or africa, southern or southern africa or africa, eastern or east africa or eastern africa or africa, western or west africa or western africa or west indies or indian ocean islands or caribbean or central america or latin america or "south and central america" or south america or asia, central or central asia or asia, northern or north asia or northern asia or asia, southeastern or southeastern asia or south eastern asia or southeast asia or south east asia or asia, western or western asia or europe, eastern or east europe or eastern europe or developing country or developing countries or developing nation? or developing population? or developing world or less developed countr* or less developed nation? or less developed population? or less developed world or lesser developed countr* or lesser developed nation? or lesser developed population? or lesser developed world or under developed countr* or under developed nation? or under developed population? or under developed world or underdeveloped countr* or underdeveloped nation? or underdeveloped population? or underdeveloped world or middle income countr* or middle income nation? or middle income population? or low income countr* or low income nation? or low income population? or lower income countr* or lower income nation? or lower income population? or underserved countr* or underserved nation? or underserved population? or underserved world or under served countr* or under served nation? or under served population? or under served world or deprived countr* or deprived nation? or deprived population? or deprived world or poor countr* or poor nation? or poor population? or poor world or poorer countr* or poorer nation? or poorer population? or poorer world or developing econom* or less developed econom* or lesser developed econom* or under developed econom* or underdeveloped econom* or middle income econom* or low income econom* or lower income econom* or low gdp or low gnp or low gross domestic or low gross national or lower gdp or lower gnp or lower gross domestic or lower gross national or lmic or lmics or third world or lami countr* or transitional countr* or emerging economies or emerging nation?)) OR AB ((afghanistan or albania or algeria or american samoa or angola or "antigua and barbuda" or antigua or barbuda or armenia or armenian or aruba or azerbaijan or bahrain or bangladesh or barbados or republic of belarus or belarus or byelarus or belorussia or byelorussian or belize or british honduras or benin or dahomey or bhutan or bolivia or "bosnia and herzegovina" or bosnia or herzegovina or botswana or bechuanaland or brazil or brasil or bulgaria or burkina faso or burkina fasso or upper volta or burundi or urundi or cabo verde or cape verde or cambodia or kampuchea or khmer republic or cameroon or cameron or cameroun or central african republic or ubangi shari or chad or colombia or comoros or comoro islands or iles comores or mayotte or democratic republic of the congo or democratic republic congo or congo or zaire or costa rica or "cote d'ivoire" or "cote d'ivoire" or cote divoire or cote d ivoire or ivory coast or croatia or

cuba or cyprus or czech republic or czechoslovakia or djibouti or french somaliland or dominica or dominican republic or ecuador or egypt or united arab republic or el salvador or equatorial guinea or spanish guinea or eritrea or estonia or eswatini or swaziland or ethiopia or fiji or gabon or gabonese republic or gambia or “georgia (republic)” or georgian or ghana or gold coast or gibraltar or greece or grenada or guam or guatemala or guinea or guinea bissau or guyana or british guiana or haiti or hispaniola or honduras or hungary or india or indonesia or timor or iran or iraq or isle of man or jamaica or jordan or kazakhstan or kazakh or kenya or “democratic people’s republic of korea” or republic of korea or north korea or south korea or korea or kosovo or kyrgyzstan or kirghizia or kirgizstan or kyrgyz republic or kirghiz or laos or lao pdr or “lao people’s democratic republic” or latvia or lebanon or lebanese republic or lesotho or basutoland or liberia or libya or libyan arab jamahiriya or lithuania or macau or macao or republic of north macedonia or macedonia or madagascar or malagasy republic or malawi or nyasaland or malaysia or malay federation or malaya federation or maldives or indian ocean islands or indian ocean or mali or malta or micronesia or federated states of micronesia or kiribati or marshall islands or nauru or northern mariana islands or palau or tuvalu or mauritania or mauritius or mexico or moldova or moldovian or mongolia or montenegro or morocco or ifni or mozambique or portuguese east africa or myanmar or burma or namibia or nepal or netherlands antilles or nicaragua or niger or nigeria or oman or muscat or pakistan or panama or papua new guinea or new guinea or paraguay or peru or philippines or philipines or philippines or phillippines or poland or “polish people’s republic” or portugal or portuguese republic or romania or russia or russian federation or ussr or soviet union or union of soviet socialist republics or rwanda or ruanda or samoa or pacific islands or polynesia or samoan islands or navigator island or navigator islands or “sao tome and principe” or saudi arabia or senegal or serbia or seychelles or sierra leone or slovakia or slovak republic or slovenia or melanesia or solomon island or solomon islands or norfolk island or norfolk islands or somalia or south africa or south sudan or sri lanka or ceylon or “saint kitts and nevis” or “st. kitts and nevis” or saint lucia or “st. lucia” or “saint vincent and the grenadines” or saint vincent or “st. vincent” or grenadines or sudan or suriname or surinam or dutch guiana or netherlands guiana or syria or syrian arab republic or tajikistan or tadjikistan or tadjikistan or tadjik or tanzania or tanganyika or thailand or siam or timor leste or east timor or togo or togolese republic or tonga or “trinidad and tobago” or trinidad or tobago or tunisia or turkey or turkmenistan or turkmen or uganda or ukraine or uzbekistan or uzbek or vanuatu or new hebrides or venezuela or vietnam or viet nam or middle east or west bank or gaza or palestine or yemen or yugoslavia or zambia or zimbabwe or northern rhodesia or global south or africa south of the sahara or sub-saharan africa or subsaharan africa or africa, central or central africa or africa, northern or north africa or northern africa or magreb or maghrib or sahara or africa, southern or southern africa or africa, eastern or east africa or eastern africa or africa, western or west africa or western africa or west indies or indian ocean islands or caribbean or central america or latin america or “south and central america” or south america or asia, central or central asia or asia, northern or north asia or northern asia or asia, southeastern or southeastern asia or south eastern asia or southeast asia or south east asia or asia, western or western asia or europe, eastern or east europe or eastern europe or developing country or developing countries or developing nation? or developing population? or developing world or less developed countr* or less developed nation? or less developed population? or less developed world or lesser developed countr* or lesser developed nation? or lesser developed population? or lesser developed world or under developed countr* or under developed nation? or under developed population? or under developed world or underdeveloped countr* or underdeveloped nation? or underdeveloped population? or underdeveloped world or middle income countr* or middle income nation? or middle income population? or low income countr* or low income nation? or low income population? or lower income countr* or lower income nation? or lower income population? or underserved countr* or underserved nation? or underserved population? or underserved world or under served countr* or under served nation? or under served population? or under served world or deprived countr* or deprived nation? or deprived population? or deprived world or poor countr* or poor nation? or poor population? or poor world or poorer countr* or poorer nation? or poorer population? or poorer world or developing econom* or less developed econom* or lesser developed econom* or under developed econom* or underdeveloped econom* or middle income econom* or low income econom* or lower income econom* or low gdp or low gnp or low gross domestic or low gross national or lower gdp or

lower gnp or lower gross domestic or lower gross national or lmic or lmic or third world or lami countr* or transitional countr* or emerging economies or emerging nation?))

S15 S13 NOT S14

S16 S13 NOT S14 Limiters – Abstract Available

S17 S13 NOT S14 Limiters – Abstract Available; Published Date: 20110101-20211231

S18 S13 NOT S14 Limiters – Abstract Available; Published Date: 20110101-20211231

EconLit

S20 AB (((hypertens* or ((essential or isolate*) N3 hypertension) or ((elevat* or high or increase*) N3 (blood adj pressur*))))) OR TI (((hypertens* or ((essential or isolate*) N3 hypertension) or ((elevat* or high or increase*) N3 (blood adj pressur*))))) OR (MH "Hypertension+")

S21 AB ((afghanistan or albania or algeria or american samoa or angola or "antigua and barbuda" or antigua or barbuda or armenia or armenian or aruba or azerbaijan or bahrain or bangladesh or barbados or republic of belarus or belarus or byelarus or belorussia or byelorussian or belize or british honduras or benin or dahomey or bhutan or bolivia or "bosnia and herzegovina" or bosnia or herzegovina or botswana or bechuanaland or brazil or brasil or bulgaria or burkina faso or burkina fasso or upper volta or burundi or urundi or cabo verde or cape verde or cambodia or kampuchea or khmer republic or cameroon or cameron or cameroun or central african republic or ubangi shari or chad or colombia or comoros or comoro islands or iles comores or mayotte or democratic republic of the congo or democratic republic congo or congo or zaire or costa rica or "cote d'ivoire" or "cote d'ivoire" or cote divoire or cote d ivoire or ivory coast or croatia or cuba or cyprus or czech republic or czechoslovakia or djibouti or french somaliland or dominica or dominican republic or ecuador or egypt or united arab republic or el salvador or equatorial guinea or spanish guinea or eritrea or estonia or eswatini or swaziland or ethiopia or fiji or gabon or gabonese republic or gambia or "georgia (republic)" or georgian or ghana or gold coast or gibraltar or greece or grenada or guam or guatemala or guinea or guinea bissau or guyana or british guiana or haiti or hispaniola or honduras or hungary or india or indonesia or timor or iran or iraq or isle of man or jamaica or jordan or kazakhstan or kazakh or kenya or "democratic people's republic of korea" or republic of korea or north korea or south korea or korea or kosovo or kyrgyzstan or kirghizia or kirgizstan or kyrgyz republic or kirghiz or laos or lao pdr or "lao people's democratic republic" or latvia or lebanon or lebanese republic or lesotho or basutoland or liberia or libya or libyan arab jamahiriya or lithuania or macau or macao or republic of north macedonia or macedonia or madagascar or malagasy republic or malawi or nyasaland or malaysia or malay federation or malaya federation or maldives or indian ocean islands or indian ocean or mali or malta or micronesia or federated states of micronesia or kiribati or marshall islands or nauru or northern mariana islands or palau or tuvalu or mauritania or mauritius or mexico or moldova or moldovian or mongolia or montenegro or morocco or ifni or mozambique or portuguese east africa or myanmar or burma or namibia or nepal or netherlands antilles or nicaragua or niger or nigeria or oman or muscat or pakistan or panama or papua new guinea or new guinea or paraguay or peru or philippines or philipines or phillippines or phillippines or poland or "polish people's republic" or portugal or portuguese republic or romania or russia or russian federation or ussr or soviet union or union of soviet socialist republics or rwanda or ruanda or samoa or pacific islands or polynesia or samoan islands or navigator island or navigator islands or "sao tome and principe" or saudi arabia or senegal or serbia or seychelles or sierra leone or slovakia or slovak republic or slovenia or melanesia or solomon island or solomon islands or norfolk island or norfolk islands or somalia or south africa or south sudan or sri lanka or ceylon or "saint kitts and nevis" or "st. kitts and nevis" or saint lucia or "st. lucia" or "saint vincent and the grenadines" or saint vincent or "st. vincent" or grenadines or sudan or suriname or surinam or dutch guiana or netherlands guiana or syria or syrian arab republic or tajikistan or tadjikistan or tadjhikistan or tadjhik or

tanzania or tanganyika or thailand or siam or timor leste or east timor or togo or togolese republic or tonga or “trinidad and tobago” or trinidad or tobago or tunisia or turkey or turkmenistan or turkmen or uganda or ukraine or uzbekistan or uzbek or vanuatu or new hebrides or venezuela or vietnam or viet nam or middle east or west bank or gaza or palestine or yemen or yugoslavia or zambia or zimbabwe or northern rhodesia or global south or africa south of the sahara or sub-saharan africa or subsaharan africa or africa, central or central africa or africa, northern or north africa or northern africa or magreb or maghrib or sahara or africa, southern or southern africa or africa, eastern or east africa or eastern africa or africa, western or west africa or western africa or west indies or indian ocean islands or caribbean or central america or latin america or “south and central america” or south america or asia, central or central asia or asia, northern or north asia or northern asia or asia, southeastern or southeastern asia or south eastern asia or southeast asia or south east asia or asia, western or western asia or europe, eastern or east europe or eastern europe or developing country or developing countries or developing nation? or developing population? or developing world or less developed countr* or less developed nation? or less developed population? or less developed world or lesser developed countr* or lesser developed nation? or lesser developed population? or lesser developed world or under developed countr* or under developed nation? or under developed population? or under developed world or underdeveloped countr* or underdeveloped nation? or underdeveloped population? or underdeveloped world or middle income countr* or middle income nation? or middle income population? or low income countr* or low income nation? or low income population? or lower income countr* or lower income nation? or lower income population? or underserved countr* or underserved nation? or underserved population? or underserved world or under served countr* or under served nation? or under served population? or under served world or deprived countr* or deprived nation? or deprived population? or deprived world or poor countr* or poor nation? or poor population? or poor world or poorer countr* or poorer nation? or poorer population? or poorer world or developing econom* or less developed econom* or lesser developed econom* or under developed econom* or underdeveloped econom* or middle income econom* or low income econom* or lower income econom* or low gdp or low gnp or low gross domestic or low gross national or lower gdp or lower gnp or lower gross domestic or lower gross national or lmic or lmics or third world or lami countr* or transitional countr* or emerging economies or emerging nation?).) OR TI ((afghanistan or albania or algeria or american samoa or angola or “antigua and barbuda” or antigua or barbuda or armenia or armenian or aruba or azerbaijan or bahrain or bangladesh or barbados or republic of belarus or belarus or byelarus or belorussia or byelorussian or belize or british honduras or benin or dahomey or bhutan or bolivia or “bosnia and herzegovina” or bosnia or herzegovina or botswana or bechuanaland or brazil or brasil or bulgaria or burkina faso or burkina fasso or upper volta or burundi or urundi or cabo verde or cape verde or cambodia or kampuchea or khmer republic or cameroon or cameron or cameroun or central african republic or ubangi shari or chad or colombia or comoros or comoro islands or iles comores or mayotte or democratic republic of the congo or democratic republic congo or congo or zaire or costa rica or “cote d’ivoire” or “cote d’ivoire” or cote divoire or cote d ivoire or ivory coast or croatia or cuba or cyprus or czech republic or czechoslovakia or djibouti or french somaliland or dominica or dominican republic or ecuador or egypt or united arab republic or el salvador or equatorial guinea or spanish guinea or eritrea or estonia or eswatini or swaziland or ethiopia or fiji or gabon or gabonese republic or gambia or “georgia (republic)” or georgian or ghana or gold coast or gibraltar or greece or grenada or guam or guatemala or guinea or guinea bissau or guyana or british guiana or haiti or hispaniola or honduras or hungary or india or indonesia or timor or iran or iraq or isle of man or jamaica or jordan or kazakhstan or kazakh or kenya or “democratic people’s republic of korea” or republic of korea or north korea or south korea or korea or kosovo or kyrgyzstan or kirghizia or kirgizstan or kyrgyz republic or kirghiz or laos or lao pdr or “lao people’s democratic republic” or latvia or lebanon or lebanese republic or lesotho or basutoland or liberia or libya or libyan arab jamahiriya or lithuania or macau or macao or republic of north macedonia or macedonia or madagascar or malagasy republic or malawi or nyalaland or malaysia or malay federation or malaya federation or maldives or indian ocean islands or indian ocean or mali or malta or micronesia or federated states of micronesia or kiribati or marshall islands or nauru or northern mariana islands or palau or tuvalu or mauritania or mauritius or mexico or moldova or moldovian or mongolia or montenegro or morocco or ifni or mozambique or portuguese east africa or myanmar or burma or namibia or nepal or netherlands antilles or nicaragua or niger or nigeria or oman or muscat or pakistan or

panama or papua new guinea or new guinea or paraguay or peru or philippines or philipines or philippines or philippines or poland or “polish people’s republic” or portugal or portuguese republic or romania or russia or russian federation or ussr or soviet union or union of soviet socialist republics or rwanda or ruanda or samoa or pacific islands or polynesia or samoan islands or navigator island or navigator islands or “sao tome and principe” or saudi arabia or senegal or serbia or seychelles or sierra leone or slovakia or slovak republic or slovenia or melanesia or solomon island or solomon islands or norfolk island or norfolk islands or somalia or south africa or south sudan or sri lanka or ceylon or “saint kitts and nevis” or “st. kitts and nevis” or saint lucia or “st. lucia” or “saint vincent and the grenadines” or saint vincent or “st. vincent” or grenadines or sudan or suriname or surinam or dutch guiana or netherlands guiana or syria or syrian arab republic or tajikistan or tadjikistan or tadzhikistan or tadjik or tanzania or tanganyika or thailand or siam or timor leste or east timor or togo or togolese republic or tonga or “trinidad and tobago” or trinidad or tobago or tunisia or turkey or turkmenistan or turkmen or uganda or ukraine or uzbekistan or uzbek or vanuatu or new hebrides or venezuela or vietnam or viet nam or middle east or west bank or gaza or palestine or yemen or yugoslavia or zambia or zimbabwe or northern rhodesia or global south or africa south of the sahara or sub-saharan africa or subsaharan africa or africa, central or central africa or africa, northern or north africa or northern africa or magreb or maghrib or sahara or africa, southern or southern africa or africa, eastern or east africa or eastern africa or africa, western or west africa or western africa or west indies or indian ocean islands or caribbean or central america or latin america or “south and central america” or south america or asia, central or central asia or asia, northern or north asia or northern asia or asia, southeastern or southeastern asia or south eastern asia or southeast asia or south east asia or asia, western or western asia or europe, eastern or east europe or eastern europe or developing country or developing countries or developing nation? or developing population? or developing world or less developed countr* or less developed nation? or less developed population? or less developed world or lesser developed countr* or lesser developed nation? or lesser developed population? or lesser developed world or under developed countr* or under developed nation? or under developed population? or under developed world or underdeveloped countr* or underdeveloped nation? or underdeveloped population? or underdeveloped world or middle income countr* or middle income nation? or middle income population? or low income countr* or low income nation? or low income population? or lower income countr* or lower income nation? or lower income population? or underserved countr* or underserved nation? or underserved population? or underserved world or under served countr* or under served nation? or under served population? or under served world or deprived countr* or deprived nation? or deprived population? or deprived world or poor countr* or poor nation? or poor population? or poor world or poorer countr* or poorer nation? or poorer population? or poorer world or developing econom* or less developed econom* or lesser developed econom* or under developed econom* or underdeveloped econom* or middle income econom* or low income econom* or lower income econom* or low gdp or low gnp or low gross domestic or low gross national or lower gdp or lower gnp or lower gross domestic or lower gross national or lmic or lmics or third world or lami countr* or transitional countr* or emerging economies or emerging nation

S22 S20 NOT S21

S23 S20 NOT S21 Limiters – Published Date: 20110101-20201231

S24 S20 NOT S21 Limiters – Published Date: 20110101-20201231

Narrow by Language: – english

Cochrane

#1 MeSH descriptor: [Costs and Cost Analysis] explode all trees

#2 MeSH descriptor: [Economics] this term only

#3 #1 OR #2

#4 (benefit or cost* or expenditure* or Life years or “disability adjusted life years” or effectiveness or qaly*):ti,ab

#5 MeSH descriptor: [Quality-Adjusted Life Years] explode all trees

#6 #4 OR #5

#7 #3 AND #6

#8 MeSH descriptor: [Cost-Benefit Analysis] explode all trees

#9 (cost-effectiveness analysis or cost-utility analysis or economic evaluation):ti,ab

#10 #8 OR #9

#11 #7 OR #10

#12 MeSH descriptor: [Hypertension] explode all trees

#13 hypertens*:ti,ab

#14 ((essential or isolate*) NEAR/3 hypertension):ti,ab

#15 ((elevat* or high or increase*) NEAR/3 (blood adj pressur*)):ti,ab

#16 #12 OR #13 OR #14 OR #15

#17 #11 AND #16

#18 (afghan OR afghans OR afghani OR albanian OR albanians OR algerian OR algerians OR “american samoan” OR “american samoans” OR angolan OR angolans OR antiguan OR antiguans OR barbudan OR berbudans OR armenian OR armenians OR aruban OR arubans OR azerbaijani OR azerbaijanis OR bahraini OR bahrainis OR bangladeshi OR bangladeshis OR bangalees OR bayan OR bajans OR belarusian OR belarusians OR byelorussian OR byelorussians OR belizean OR belizeans OR beninese OR benineses OR bhutanese OR bolivian OR bolivians OR bosnian OR bosnians OR botswana OR batswana OR brazilian OR brazilians OR brasilian OR brasilians OR bulgarian OR bulgarians OR burkinabe OR burkinese OR burundian OR burundians OR “cape verdean” OR “cape verdeans” OR “cabo verdean” OR “cabo verdeans” OR cambodian OR cambodians OR khmer OR cameroonian OR cameroonians OR “central african” OR “central africans” OR chadian OR chadians OR chinese OR colombian OR colombians OR comorian OR comorians OR congolese OR “costa rican” OR “costa ricans” OR ivorian OR ivorians OR croatian OR croatians OR cuban OR cubans OR cypriot OR cypriots OR czech OR czechs OR djiboutian OR djiboutians OR dominican OR dominicans OR ecuadorian OR ecuadorians OR egyptian OR egyptians OR salvadoran OR salvadorans OR “equatorial guinean” OR “equatorial guineans” OR equatoguinean OR equatoguineans OR eritrean OR eritreans OR estonian OR estonians OR swazi OR swazis OR swati OR swatis OR ethiopian OR ethiopians OR fijian OR fijians OR gabonese OR gabonaise OR gambian OR gambians OR georgian OR georgians OR ghanaian OR ghanaians OR gibraltarian OR gibraltarians OR greek OR greeks OR grenadian OR grenadians OR guamanian OR guamanians OR guatemalan OR guatemalans OR guinean OR guineans OR “bissau guinean” OR “bissau guineans” OR guyanese OR haitian OR haitians OR honduran OR hondurans OR hungarian OR hungarians OR indian OR indians OR indonesian OR indonesians OR iranian OR iranians OR iraqian OR iraqians OR iraqi OR iraqis OR manx OR jamaican OR jamaicans OR jordanian OR jordanians OR kazakhstani OR kazakhstanis OR kenyan OR kenyans OR kirabati OR kirabatian OR kirabatians OR “north korean” OR “north koreans” OR korean OR koreans OR kosovar OR kosovars OR kosovan OR kosovans OR kyrgyzstani OR kyrgyzstanis

OR kyrgyz OR lao OR laotian OR laotians OR latvian OR latvians OR lebanese OR lesothan OR lesothans OR
lesothonian OR lesothonians OR mosotho OR basotho OR liberian OR liberians OR libyan OR libyans OR
lithuanian OR lithuanians OR macanese OR macedonian OR macedonians OR malagasy OR madagascan OR
madagascans OR malawian OR malawians OR malaysian OR malaysians OR maldivian OR maldivians OR malian
OR malians OR maltese OR marshallese OR marshalleses OR mauritanian OR mauritanians OR mauritian OR
mauritians OR mexican OR mexicans OR micronesia OR micronesians OR moldovan OR moldovans OR
mongolian OR mongolians OR mongol OR montenegrin OR montenegrins OR moroccan OR moroccans OR
mozambican OR mozambicans OR burmese OR myanma OR namibian OR namibians OR nauruan OR nauruans
OR nepali OR nepalese OR “netherlands antillean” OR “netherlands antilleans” OR nicaraguan OR nicaraguans
OR nigerien OR nigeriens OR nigerian OR nigerians OR “northern mariana islander” OR “northern mariana
islanders” OR mariana OR marianas OR omani OR omanis OR pakistani OR pakistanis OR palauan OR palauans OR
panamanian OR panamanians OR “papua new guinean” OR “papua new guineans” OR paraguay OR
paraguayans OR peruvian OR peruvians OR philippine OR philippines OR philippine OR philippines OR philippine OR
phillippines OR phillippine OR phillippines OR filipino OR filipinos OR filipina OR filipinas OR polish OR pole OR
poles OR portuguese OR romanian OR romanians OR russian OR russians OR “soviet people” OR “soviet
population” OR rwandan OR rwandans OR rwandese OR ruandan OR ruandans OR ruandese OR samoan OR
samoans OR “sao tomean” OR “sao tomeans” OR santomean OR santomeans OR “saudi arabian” OR “saudi
arabians” OR saudi OR saudis OR senegalese OR serbian OR serbians OR montenegrin OR montenegrins OR
seychellois OR seychelloise OR seychelloises OR “sierra leonean” OR “sierra leoneans” OR slovak OR slovak OR
slovene OR slovenes OR “solomon islander” OR “solomon islanders” OR somali OR somalis OR “south african” OR
“south africans” OR “south sudanese” OR “sri lankan” OR “sri lankans” OR ceylonese OR kittitian OR kittitians OR
nevisian OR nevisians OR “saint lucian” OR “saint lucians” OR vincentian OR vincentians OR sudanese OR
surinamese OR surinameses OR syrian OR syrians OR tajik OR tajiks OR tajikistani OR tajikistanis OR tanzanian OR
tanzanians OR tanganyikan OR tanganyikans OR thai OR timorese OR timorese OR togolese OR tongan OR
tongans OR trinidadian OR trinidadians OR tobagonian OR tobagonians OR tunisian OR tunisians OR turk OR
turks OR turkish OR turkmen OR turkmens OR tuvaluan OR tuvaluans OR ugandan OR ugandans OR ukrainian OR
ukrainians OR uzbek OR uzbeks OR vanuatu OR vanuatuan OR vanuatuan OR venezuelan OR venezuelans OR
vietnamese OR yemeni OR yemenis OR yemenite OR yemenites OR yemenese OR yugoslav OR yugoslavs OR
yugoslavian OR yugoslavians OR zambian OR zambians OR zimbabwean OR zimbabweans):ti,ab,kw 62510

#19 #17 NOT #18 with Cochrane Library publication date Between Jan 2011 and Jan 2021, in Cochrane Reviews

#20 #17 NOT #18 with Publication Year from 2011 to 2021, in Trials

#21 #19 OR #20

Appendix F
Included Studies (Economic Review):
Heart Disease and Stroke Prevention:
Team-based Care to Improve Blood Pressure Control

Adair R, Wholey DR, Christianson J, White KM, Britt H, et al. Improving chronic disease care by adding laypersons to the primary care team: a parallel randomized trial. *Annals of Internal Medicine* 2013;159(3):176-84.

Allen JK, Himmelfarb CRD, Szanton SL, Frick KD. Cost-effectiveness of nurse practitioner/community health worker care to reduce cardiovascular health disparities. *Journal of Cardiovascular Nursing* 2014;29(4):308.

Augustovski F, Chaparro M, Palacios A, Shi L, Beratarrechea A, et al. Cost-effectiveness of a comprehensive approach for hypertension control in low-income settings in Argentina: trial-based analysis of the hypertension control program in Argentina. *Value in Health* 2018;21(12):1357-64.

Barton GR, Goodall M, Bower P, Woolf S, Capewell S, et al. Increasing heart health lifestyles in deprived communities: economic evaluation of lay health trainers. *Journal of Evaluation in Clinical Practice* 2012;18(4):835-40.

Billups SJ, Moore LR, Olson KL, Magid DJ. Cost-effectiveness evaluation of a home blood pressure monitoring program. *American Journal of Managed Care* 2014;20(9):e380-7.

Chan C-W, Siu S-C, Wong CK, Lee VW. A pharmacist care program: positive impact on cardiac risk in patients with type 2 diabetes. *Journal of Cardiovascular Pharmacology and Therapeutics* 2012;17(1):57-64.

Chung JS, Lee KK, Tomlinson B, Lee VW. Clinical and economic impact of clinical pharmacy service on hyperlipidemic management in Hong Kong. *Journal of Cardiovascular Pharmacology and Therapeutics* 2011;16(1):43-52.

Dehmer SP, Baker-Goering MM, Maciosek MV, Hong Y, Kottke TE, et al. Modeled health and economic impact of team-based care for hypertension. *American Journal of Preventive Medicine* 2016;50(5):S34-S44.

Dehmer SP, Maciosek MV, Trower NK, Asche SE, Bergdall AR, et al. Economic evaluation of the home blood pressure telemonitoring and pharmacist case management to control hypertension (Hyperlink) trial. *Journal of the American College of Clinical Pharmacy* 2018;1(1):21-30.

Dixon P, Hollinghurst S, Edwards L, Thomas C, Gaunt D, et al. Cost-effectiveness of telehealth for patients with raised cardiovascular disease risk: evidence from the Healthlines randomised controlled trial. *BMJ Open* 2016;6(8):e012352.

Fishman PA, Cook AJ, Anderson ML, Ralston JD, Catz SL, et al. Improving BP control through electronic communications: an economic evaluation. *American Journal of Managed Care* 2013;19(9):709-16.

Goetzel RZ, Kowlessar NM, Henke R, Benevent R, Tabrizi M, et al. Six-year cost trends at PPG industries paralleling the introduction of health promotion programs directed at cardiovascular disease prevention. *Journal of Occupational and Environmental Medicine* 2013;55(5):483-9.

Halladay JR, Tillman J, Hinderliter A, Cummings DM, Donahue KE, et al. Practice level costs of office-based hypertension performance improvement: The Heart Healthy Lenoir study. *Journal of Healthcare Management* 2017;62(2):136-50.

He J, Irazola V, Mills KT, Poggio R, Beratarrechea A, et al. Effect of a community health worker led multicomponent intervention on blood pressure control in low-income patients in Argentina: a randomized clinical trial. *JAMA* 2017;318(11):1016-25.

Henke RM, Goetzel RZ, McHugh J, Isaac F. Recent experience in health promotion at Johnson & Johnson: lower health spending, strong return on investment. *Health Affairs* 2011;30(3):490-9.

Hollenbeak CS, Weiner MG, Turner BJ. Cost-effectiveness of a peer and practice staff support intervention. *American Journal of Managed Care* 2014;20(3):253-60.

Hong JC, Padula WV, Hollin IL, Hussain T, Dietz KB, et al. Care management to reduce disparities and control hypertension in primary care. *Medical Care* 2018;56(2):179-85.

Houle SK, Chuck AW, McAlister FA, Tsuyuki RT. Effect of a pharmacist managed hypertension program on health system costs: an evaluation of the study of cardiovascular risk intervention by pharmacists Hypertension (SCRIP HTN). *Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy* 2012;32(6):527-37.

Iles RA, Eley DS, Hegney DG, Patterson E, Young J, et al. Revenue effects of practice nurse-led care for chronic diseases. *Australian Health Review* 2014;38(4):363-9.

Isetts BJ, Brummel AR, De Oliveira DR, Moen DW. Managing drug-related morbidity and mortality in the patient-centered medical home. *Medical Care* 2012;50(11):997-1001.

Katon W, Russo J, Lin EH, Schmittdiel J, Ciechanowski P, et al. Cost-effectiveness of a multicondition collaborative care intervention: a randomized controlled trial. *Archives of General Psychiatry* 2012;69(5):506-14.

Kulchaitanaroaj P, Brooks JM, Chaiyakunapruk N, Goedken AM, Chrischilles EA, et al. Cost-utility analysis of physician pharmacist collaborative intervention for treating hypertension compared with usual care. *Journal of Hypertension* 2017;35(1):178-87.

Kulchaitanaroaj P, Carter BL, Goedken AM, Chrischilles EA, Brooks JM. Instrumental variable methods to assess quality of care the marginal effects of process-of-care on blood pressure change and treatment costs. *Research in Social and Administrative Pharmacy* 2015;11(2):e69-e83.

Monahan M, Jowett S, Nickless A, Franssen M, Grant S, et al. Cost-effectiveness of telemonitoring and self-monitoring of blood pressure for antihypertensive titration in primary care (TASMINH4). *Hypertension* 2019;73(6):1231-9.

Overwyk KJ, Dehmer SP, Roy K, Maciosek MV, Hong Y, et al. Modeling the health and budgetary impacts of a team-based hypertension care intervention that includes pharmacists. *Medical Care* 2019;57(11):882-9.

Panattoni L, Dillon E, Hurlimann L, Durbin M, Tai-Seale M. Cost estimates for designing and implementing a novel team care model for chronically ill patients. *Journal of Ambulatory Care Management* 2018;41(1):58-70.

Polgreen LA, Han J, Carter BL, Ardery GP, Coffey CS, et al. Cost-effectiveness of a physician-pharmacist collaboration intervention to improve blood pressure control. *Hypertension* 2015;66(6):1145-51.

Prezio EA, Pag n JA, Shuval K, Culica D. The Community Diabetes Education (CoDE) program: cost-effectiveness and health outcomes. *American Journal of Preventive Medicine* 2014;47(6):771-9.

Reiss-Brennan B, Brunisholz KD, Dredge C, Briot P, Grazier K, et al. Association of integrated team-based care with health care quality, utilization, and cost. *Journal of the American Medical Association* 2016;316(8):826-34.

Shireman TI, Svarstad BL. Cost-effectiveness of Wisconsin TEAM model for improving adherence and hypertension control in black patients. *Journal of the American Pharmacists Association* 2016;56(4):389-96.

Siaw M, Ko Y, Malone D, Tsou K, Lew YJ, et al. Impact of pharmacist involved collaborative care on the clinical, humanistic and cost outcomes of high risk patients with type 2 diabetes (IMPACT): a randomized controlled trial. *Journal of Clinical Pharmacy and Therapeutics* 2017;42(4):475-82.

Simpson S, Lier D, Majumdar S, Tsuyuki R, Lewanczuk R, et al. Cost effectiveness analysis of adding pharmacists to primary care teams to reduce cardiovascular risk in patients with type 2 diabetes: results from a randomized controlled trial. *Diabetic Medicine* 2015;32(7):899-906.

Stoddart A, Hanley J, Wild S, Pagliari C, Paterson M, et al. Telemonitoring-based service redesign for the management of uncontrolled hypertension (HITS): cost and cost-effectiveness analysis of a randomised controlled trial. *BMJ Open* 2013;3(5).

Twiner MJ, Marinica AL, Kuper K, Goodman A, Mahn JJ, et al. Screening and treatment for subclinical hypertensive heart disease in emergency department patients with uncontrolled blood pressure: a cost effectiveness analysis. *Academic Emergency Medicine* 2017;24(2):168-76.

Wagner TH, Willard-Grace R, Chen E, Bodenheimer T, Thom DH. Costs for a health coaching intervention for chronic care management. *American Journal of Managed Care* 2016;22(4):e141-6.

Appendix G Summary Evidence Table (Economic Review):

Heart Disease and Stroke Prevention: Team-based Care to Improve Blood Pressure Control

This table outlines information from the studies included in the Community Guide economic review of team-based care to improve blood pressure control. It details study design and economic analysis, population and intervention characteristics, and economic outcomes considered in this review. Complete references for each study can be found in the Included Studies section of the [review summary](#).

Abbreviations Used in this Document

- Economic outcomes:
 - DALY: disability-adjusted life year
 - QALY: quality-adjusted life year
 - ROI: return on investment
- Effectiveness outcomes:
 - A1c: glycated hemoglobin
 - BP: blood pressure
 - DBP: diastolic blood pressure
 - HDL-C: High density lipoprotein cholesterol
 - LDL-C: Low density lipoprotein cholesterol
 - SBP: systolic blood pressure
- Study design:
 - RCT: randomized controlled trial
- Measurement terms:
 - DiD: difference in difference
 - Pct pt: percentage point
- Other terms:
 - JNC-7: The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure
 - ADA: American Diabetes Association
 - CHD: coronary heart disease
 - CHW: community health worker
 - CKD: chronic kidney disease
 - Conversion Factor: Consumer Price Index/Purchasing Power Parity
 - CV: cardiovascular
 - CVD: cardiovascular disease
 - ED: emergency department
 - EHR: electronic health record
 - HCUP: Healthcare Cost and Utilization Project
 - HTN: hypertension
 - MEPS: Medical Expenditure Panel Survey
 - MI: myocardial infarction
 - mmHg: millimeters of mercury
 - MTM: Medication Therapy Management
 - NHS, National Health Service, UK
 - NA, not applicable
 - NR: not reported
 - PCP: primary care provider
 - SMBP, self-measured blood pressure
 - T2DM: type 2 diabetes

Notes:

- **Quality** of economic estimates – Studies are assessed to be of good, fair, or limited quality. This valuation is based on two domains: Quality of Capture [<https://www.thecommunityguide.org/about/glossary#quality-based-on-capture>], and Quality of Measurement [<https://www.thecommunityguide.org/about/glossary#quality-based-on-measure>].
- **Race/ethnicity** of the study population: The Community Guide only summarizes race/ethnicity for studies conducted in the United States.

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Author (Year): Adair et al. (2013) Design: RCT Economic Method: Intervention cost and healthcare cost Funding Source: Rabina Foundation Monetary Values: Reported in 2012 U.S. dollars	Location: Multiple locations, Minnesota, USA Setting: Primary care clinics Population: Patients with hypertension, diabetes, or congestive heart failure aged 18 to 79 years who had an office visit during the 6-month enrollment period. Sample Size: Intervention: 1,429 Control: 706 Characteristics: Mean Age: 61 years Female: 50% Medicaid: 7% White: 90% HTN: 82% T2DM: 65% Heart failure: 6% High school or less: 39% Baseline clinicals: SBP: 128.8 DBP: 74.5	Intervention: 12 care guides with 2 or more years of college assigned to 6 clinics. Median number of patients per care guide was 120. Care followed ADA and JNC-7. 2 weeks training on basic information about hypertension, diabetes, and heart failure, barriers to care and resources for overcoming them; professional behavior; use of EHR; and behavior change techniques, including motivational interviewing, goal setting, contracting, and feedback. Care guides had workstation locations within clinic. Two registered nurses supervised the lay workers. Main objective to help patients and their primary care providers achieve recommended written and signed care goals.	Intervention effects: Measured at 12 months. Pct pt change in goals met (odds of meeting goal): All goals: 3.0 (1.31) HTN: 3.0 (1.29) T2DM: 1.9 (1.35) Heart failure: -1.5 (1.58) Source: Trial records Measure Type: DiD	Intervention cost: \$286 per patient per year Components: Care guides (\$511,176); 2 nurse supervisors (\$116,736); training (\$3,031), 12 workstations (\$108,000 amortized over 5 years) Care guides reported median of 4 provider contacts and 7 patient contacts (2 face to face and 5 by phone) Source: Study records and human resources for compensation. Quality: Good	Healthcare cost: Pre 1 year (post 1 year) mean: Inpatient intervention \$30,041 (\$32,791) control \$25,815 (\$32,734) with difference -\$4,169 Professional charges intervention \$3,746 (\$3,812) control \$3,759 (\$3,851) with difference -\$26 Components: Inpatient, ED, outpatient Source: Health plan claims data All cause Measure Type: DiD Productivity: NR Quality: Fair	ROI: 13.7 Limitations: Baseline inpatient count of visits and cost much higher for intervention compared to control. However, note the estimated difference is from a regression presumably adjusting for baseline. Quality: Fair

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
	LDL: 86.1 A1c: 7.4 Time Horizon: Recruitment July 2010 to April 2012. Intervention length 12 months.	Care guides met with providers and sent them electronic messages as needed. Quarterly reports on goals achieved and not achieved for patients and primary care providers. Comparison: Both usual care and intervention received written material on benefits of achieving disease treatment goals.				
Author (Year): Allen et al. (2014) Design: RCT Economic Method: Intervention cost and cost per unit effectiveness outcomes. Partial healthcare cost. Funding Source: National Heart Lung and Blood Institute Grant Monetary Values: Reported in 2011 U.S. dollars	Location: Baltimore, Maryland, USA Setting: Patients drawn from two federally qualified health centers, Baltimore Medical Systems Inc (BMS). Population: African American or White patients ≥21 years with diagnosed CVD, T2DM, high BP, high cholesterol. Sample Size: Intervention: 261 Control: 264 Characteristics: African American: 79%	Intervention: Community Outreach and Cardiovascular Health study. Tailored educational and behavioral counseling for lifestyle modification, pharmacologic management, and telephone follow-ups. Nurse Practitioner (NP)-led team-based case management with CHWs for CVD risk reduction. Intensity of interaction with patients and physician depended on goals achieved. NP coordinated cases, managed intervention plan, lifestyle counseling, drug titration and	Intervention effects: A1c reduced by 0.5 pct pt LDL reduced by 15.9 mg/dL SBP decreased by 6.2 mmHg DBP decreased - 3.1 mmHg Source: Study records Measure Type: DiD	Intervention cost per patient per year: \$251 (NP=\$217 and CHW=\$34) Cost for control per patient per year: \$308 Components: CHW and NP time with patients Preparation and follow-up time Wage rate plus 30% Mean encounters during 1 year with: NP 7.6, CHW 5.3 Source:	Healthcare cost per person per year: Intervention Labs: \$439 Medication: \$2,139 Total: \$2,578 Control Labs: \$206 Medication: \$1,684 Total: \$1,890 Difference: \$688 higher Components: Laboratory, drugs Source: Health plan claims data Measure Type: DiD Productivity	Intervention plus healthcare cost per patient per year: Intervention: \$2,829 Control: \$2,198 Difference: \$631 Cost per unit reduction in key outcomes: SBP: \$102 per mmHg DBP: \$204 per mmHg LDL: \$40 per mg/dL A1c: \$1,262 per pct pt Quality: Fair

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
	Private insurance: <50% % Female: 71% Mean Age: 55 years Time Horizon: Recruited July 2006 to July 2009. Length of intervention is 12 months.	prescription, conferred with physician, supervised CHWs. CHW met patients to reinforce lifestyle and drug adherence instructions, assisted patients with designing strategies. Comparison: Usual care enhanced with feedback on CVD risk factors to patients and primary care providers.		NP and CHW time from 30% sample of patient records. Computed average physician encounter time and wage rate. Mean visits in 1 year: 2.8 Quality: Fair	NR Quality: Fair	Comment: Mix of patients with diabetes, CVD, high BP, high cholesterol The intervention cost compared to usual primary care by physician is negative or cost-saving. Healthcare cost does not include ED and inpatient stays.
Author (Year): Augustovski et al. (2018) Linked to He et al. (2017) Design: RCT Economic Method: Cost per QALY Funding Source: National Heart, Lung, and Blood Institute; partially by the National Institute of General Medical Sciences	Location: Multiple provinces, Argentina Setting: Primary care centers Population: Low-income patients and household members 21 years or older with SBP/DBP ≥ 140/90 Sample Size: Intervention: 743 Control: 689 Characteristics: Mean age: 56 years Female: 53%	Intervention: Home-visit CHW intervention with free BP monitors. Physician care in public primary care centers, physician online education on guideline-based stepped-care for high BP, and patient personalized weekly text messaging for lifestyle and medication adherence. CHWs had 2-day interactive training and field testing. Initial home visit was 90 minutes to provide BP monitor, pill box, written education materials, and log to record BP readings, and to train on	Intervention effects: Measured at 18 months for intervention versus control Change in SBP: -5.3 DBP: -5.1 Change in percentage with BP control: 19 pct pt Change in QALY: 0.042	18-month cost for intervention per patient: \$108 Components: Cell phone platform development (\$6.87), training workshops (\$4.02), patient education materials (\$6.12), BP monitor (\$18.29), CHW visits (\$61.27), field work coordination (\$3.89), text messages (\$7.56)	18-month change in healthcare cost per patient: Intervention: \$196.26 Control: \$153.58 Difference: \$42.52 Components: Outpatient, inpatient, BP medications, labs Measure Type: DiD Productivity: NR Source: Medical records Quality: Good	Cost per QALY gained: \$3,299 100% certainty cost-effective with threshold at 1 GDP Argentina (\$14,062) in 1000 simulations Quality: Good

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Monetary Values: Reported in 2009 U.S. dollars	Mean SBP: 151.7 Mean DBP: 92.2 On medication: 92% Primary care visit past 6 months: 59% Time Horizon: Recruited June 2013 to April 2015. Study length was 18 months.	use of BP monitor. Subsequent visits were 60 minutes. CHWs updated physicians about visit results. Physicians received monthly BP values to determine medication changes. Comparison: Usual care in primary care centers	92% of planned home visits were completed Source: Trial records and EuroQoL EQ-5D-3L (3L adds a visual questionnaire to the 5D text-based questionnaire) for QALY Measure Type: DiD Quality: Good	Source: Study and trial records Quality: Good		
Author (Year): Barton et al. (2012) Design: RCT Economic Method: Cost per QALY Funding Source: Medical Research Council (MRC) National Prevention Research Initiative Monetary Values:	Location: Liverpool, UK Setting: CHWs within urban community Population: Patients ≥ 18 years age identified by 5 general practices serving deprived communities, with one of 5 CVD risks: high BP, high cholesterol, smoking, diabetes, BMI>30. Excluded established CVD. Sample Size: Intervention: 72	Intervention: 6 CHWs trained by research team. Behavior changes through short-term goals and building self-efficacy. Focus on diet, beliefs, challenges to change. CHW service available for 3 months with target of 6 meetings, ideally face to face at client choice of location, and additional phone support. Comparison: Usual care plus health promotion literature including heart related, and food diary.	Intervention effects: 6-month mean incremental QALY 0.028 Source: QALY estimated using EQ-5D for health-related quality of life Measure Type: DiD Quality: Good	6-month cost for intervention per patient: £151.01 Components: CHW wages and benefits Source: Records maintained by CHW. Training and supervision costs apportioned across face-to-face contacts. Quality: Fair	6-month change in healthcare cost per patient: Intervention Baseline: £441.33 6-month: £366.89 Control Baseline: £398.45 6-month: £377.17 Difference: £53.16 saving healthcare cost to the National Health Service (NHS) Components: Outpatient, inpatient,	6-month change in healthcare + personal social services cost + intervention cost per patient: £97.85 Incremental QALY: 0.028 over 6 months Cost per QALY gained: £14,480 Quality: Fair Comments: Probability intervention is

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Reported in 2009 UK pounds	Control: 38 Characteristics: Mean age: 53 years Female: 59% BMI>30: 64% High cholesterol: 49% High BP: 39% Diabetes: 14% Smoke: 21% Time Horizon: Recruitment Feb-Aug 2008. Study length was 6 months.				drugs, personal social services Measure Type: DiD Productivity: NR Source: Patient reported units of utilization converted to cost using NHS cost per unit. Quality: Fair	cost-effective is 39% if threshold is £20,000. Short horizon implies estimate is conservative.
Author (Year): Billups et al. (2014) Linked to Magid et al. (2013) Design: Modeled from RCT Economic Method: Intervention cost; healthcare cost; cost per life year gained Funding Source: Kaiser Permanente Monetary Values:	Location: Denver-Boulder Metro, Colorado, USA Setting: Primary care clinic Population: Patients in Kaiser Permanente-Colorado aged 18 to 79 years with uncontrolled hypertension. Must have a primary care provider and be registered on the health system's patient portal. Sample Size: Intervention: 175 Control: 173 Characteristics:	Intervention: Pharmacist collaborate with physicians for blood pressure control. Home blood pressure (HBP) group's BP measurements sent automatically from device via American Heart Association web-interface Heart360 to clinical pharmacy specialist to manage hypertension. Management by email and phone. EHR system enables web-based communication between patients and providers. Under pre-approved collaborative arrangement,	Intervention effects: SBP reduced 12.5 mmHg versus control At 6 months, there was 19 pct pt increase in patients meeting blood pressure goal among intervention versus control group. Source: Study records Measure Type: DiD	Intervention cost per person per year: \$200 Components: Labor Source: Study records and pharmacist time Quality: Fair	Change in healthcare cost per patient per year versus control: \$276 Components: Inpatient, outpatient, ED, medication. Measure Type: DiD Source: Medical claims Quality: Good Productivity: NR	Net cost per patient per year: \$476 Quality: Fair Net cost per life year gained: \$3,330 Quality: Good

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Reported in 2013 U.S. dollars.	Mean Age: 60 years Female: 38% White: 82% African American: 7% Hispanic: 7% Asian: 3% Mean SBP 149 DBP: 90 Time Horizon: Intervention length was 6 months.	pharmacist may initiate or alter drug therapy and order labs and provide medication and lifestyle counseling. Comparison: Usual physician care.				
Author (Year): Chan et al. (2012) Design: RCT Economic Method: Intervention cost and partial healthcare cost Funding Source: School of Pharmacy, The Chinese University of Hong Kong and the Diabetes Research Fund, Diabetes Hong Kong Monetary Values:	Location: Hong Kong, China Setting: Diabetes clinic in public hospital Population: Patients referred by diabetes nurses to pharmacists. Age 18 and older with T2DM, A1c greater than 8%, and at least 5 medications, one of which was hypoglycemic. Those with existing CVD excluded. Sample Size: Intervention: 51 Control: 54 Characteristics: Mean Age: 63 years Female: 41%	Intervention: Pharmacist met patient for 15-30 minutes before every visit with physician. Included medication history review. Each visit addressed areas of medication adherence, knowledge and beliefs, skills, perceived health, and cognitive function. Tailored medication adherence, CVD education, and lifestyle modifications were provided. Notes made in medical record to physician for drug related problems. Provided color coded pill boxes and drug bags. Medications were for T2DM, BP, lipids, anti-coagulation.	Intervention effects: Measured at baseline and 9 months for intervention versus control Mean pharmacist visits per patient: 5 33% related to adherence and 30% in lifestyle modification. Compliance (=number of tablets taken/correct number) improved by 20.5 pct pt. CHD risk score reduced 0.11. 5-year	Intervention cost per patient over 9 months: \$64 Components: Pharmacist time Source: Tracked in study Quality: Fair	Healthcare Cost: NR Productivity: NR	Cost per CHD event averted 5-year probability of CHD reduced 1.64% Intervention cost per patient: \$64 Cost per CHD event avoided: \$3902 Average cost of MI treatment: \$8989 Savings per patient over 5 years: \$5086 Quality: Fair Limitations:

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Reported in 2008 in U.S. dollars	Mean SBP: 141 Mean DBP: 75 Mean BMI: 25.2 Mean A1c: 9.7% Mean CHD risk: 2.16 Compliance: 74% T2DM: 100%. Time Horizon: Study during the May 2008 to March 2009. Intervention length was 9 months.	Comparison: Usual physician care in T2DM clinic without pharmacist services	probability of CHD reduced 1.63 pct pt Stroke risk reduced 1.37. SBP/DBP reduced by 3.3/2.1 mmHg A1c reduced 1.17 pct pt. ADA goals increased 6.9 pct pt Source: Study records Measure Type: DiD			Change in healthcare cost not estimated. Short term adherence self-reported.
Author (Year): Chung et al. (2011) Design: Pre to post with control Economic Method: Intervention cost Funding Source: The School of Pharmacy, The Chinese University of Hong Kong	Location: Hong Kong, China Setting: Outpatient Lipid Clinic in public hospital Population: Patients diagnosed with dyslipidemia and visiting lipid clinic (resistant dyslipidemia). No exclusion based on existing CHD. Sample Size: Intervention: 150 Control: 150	Intervention: Patients met with pharmacist 3 times during 24-month study before routine clinic visit with physician. Pharmacist made drug therapy suggestions to physicians, if necessary. Pharmacist performed patient education and follow-up of lipid profile and assessed Framingham risk score. Activities included explaining clinical values to patient, importance of medication and adherence, medication side effects, suggested	Intervention effects: Measured at 24 months LDL-C -0.49 HDL-C 0.05 Total Cholesterol - 0.66 Triglycerides - 0.42 Mean Adherence (Number of days pills taken/Number of days of follow-up): 2.3 pct pt	Intervention cost per patient per year: \$114.84 Scaled intervention cost to treat all ~\$5,500 Intervention cost for dyslipidemia patients per year: \$52,635 (\$9.68 per patient per month) Components: Pharmacist time in documentation, educational visits, and follow-up calls Source:	Change in Healthcare Cost: Potential avoidance of \$6 million in healthcare cost due to acute myocardial infarctions avoided per year (770 MIs at cost of \$8010 per event). Components: All costs for myocardial infarction Source: Based on incremental numbers with LDL-C at goal Measure Type:	Reviewers Calculations Cost avoided \$6,167,700 by extrapolations to MI's avoided Intervention scaled cost \$638,880 Benefit to cost ratio: 9.6 Quality: Fair Limitations: Not randomized or blinded

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Monetary Values: Reported in 2006 U.S. dollars	Characteristics: Mean Age: 56 years Female: 45% Mean LDL-C: 3.53 mmol/L Mean HDL-C: 1.60mmol/L CHD-Risk Moderate 9.3%; High 32.7% HTN: 50.7% T2DM: 26.7% Existing CVD: ≤20% Mean Adherence: 77.5% Adherent: 57%. Time Horizon: Recruitment starting Oct 2005. Intervention length 24 months	lifestyle changes, and relationship of lipid profile to CHD risk. Patients provided with educational leaflet on dyslipidemia. Check-up phone calls once a month following checklist on wellbeing, adherence, and drug issues. Patients also provided adherence aids – pill boxes, diaries, reminder calls, and calendars. Comparison: Routine lipid clinic care from physician without pharmacist	Percent Adherent (percentage of patients with adherence > 75%): 13.7 pct pt All 7 pharmacist recommended alterations to drug therapy were rejected by physician or by patient. Measure Type: DiD except for adherence	Trial records and Hong Kong pharmacist average salary Quality: Good	Post only Productivity: NR Quality: Fair	Specialized lipid clinic Notes: Adherence already high at 77%
Author (Year): Dehmer et al. (2016) Design: Model Economic Method: Modeled cost per QALY Funding Source: Centers for Disease Control and Prevention	Location: Modeled for USA Setting: Primary Care Population: Modeled for patients newly diagnosed and treated for high BP in usual care and referred to intensive team care from second year onwards. Sample Size: Modeled for 1 million patients	Intervention: Effects drawn from 16 study arms with team care mostly with pharmacist addition, followed by nurse. All had medication management, half had team members authorized to change treatment, 11 had lifestyle education and 5 had SMBP. 11 were pharmacists team members. 90% acceptance of TBC and 80% annual persistence of effects.	Intervention effects: Main effect is reduction in SBP of 8.1 mmHg LDL-C reduced by 11.9 10-year QALY increase: 922,000 Source: Modeled disease outcomes were myocardial infarction,	Intervention cost per patient per year: \$887 Components: Healthcare staff time based on commercial claims for team-based care. Patient travel and wait time. Modeled 10-year program cost: \$22.9 billion Source:	Modeled 10-year averted healthcare cost: \$25.3 billion Components: NR Source: MEPS data Productivity: Modeled 10-year productivity increase \$11 billion Measure Type: DiD	Modeled 10-year cost per QALY gained: \$2,920 Quality: Good

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Monetary Values: Reported in 2012 U.S. dollars	Characteristics: Age ≤55 years: 52.8% Female: 52.4% CVD: 12.8% HTN: 100% T2DM: 18.7% Mean SBP: 142 Mean LDL-C: 120.3 Medicaid: 3.9% Medicare: 24.9% Commercial insurance: 53.2 Uninsured: 15.1% Time Horizon: Modeled	Team care encounters 4 in-person and 8 phone visits per year. First visit 60 minutes and others 15 minutes. Comparison: Current national access to team-based care	stroke, congestive heart failure, angina pectoris, intermittent claudication, and CVD-related death based on 1-year Framingham risk equations for age, sex, BMI, systolic BP (SBP), cholesterol levels, smoking status, and history of CVD. Quality: Good	MarketScan claims data Quality: Good	Quality: Good	
Author (Year): Dehmer et al. (2018) Linked to Margolis et al. (2013) Design: Modeled based on RCT Economic Method: Intervention cost; healthcare cost Funding Source: National Heart,	Location: Minneapolis-St. Paul, Minnesota, USA Setting: Community pharmacies Population: HealthPartners enrollees aged ≥ 21 years with 2 or more primary care visits and uncontrolled blood pressure.	Intervention: Home Blood Pressure Telemonitoring and Pharmacist Care Management to Control Hypertension (Hyperlink) Pharmacist case management with home blood pressure monitoring. Patients received home blood pressure monitors that record and transmit to secure website. Patients trained on use of home monitor. Phone meeting	Change in SBP/DBP in Trial: SBP -9.7 DBP -5.1 Change in percent with BP Control: 18.4 pct pt Source: Study records Measure Type: DiD	Intervention cost per person per year: \$1,350 Components: Labor, blood pressure monitor, subscription to blood pressure transmission and monitoring services Source: Study records and pharmacist visit logs Quality: Good	Change in healthcare cost per patient per year versus control: -\$426 Components: Inpatient, outpatient, medication Measure Type: DiD Source: Medical claims Quality: Good Productivity: NR	Net cost per patient per year: \$924 Quality: Good

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Lung, and Blood Institute Monetary Values: Reported in 2010 U.S. dollars.	Sample Size: Intervention: 148 Control: 150 Characteristics: Mean age: 63 years Female: 48% Caucasian: 86.6% T2DM: 13% CVD: 9.7% Mean SBP: 148 Mean DBP: 83 Household income at least \$50K: 67.5% Time Horizon: Recruitment March 2009 to April 2011. Intervention length 12 months	with pharmacist every 2 weeks until blood pressure under control and less frequently after. Managed and provided counseling on medications, nutrition, lifestyle, self-management, and adherence. Comparison: Usual care				
Author (Year): Dixon et al. (2016 a,b) Linked to Salisbury et al. (2016) Design: RCT Economic Method: Cost per QALY Funding Source: National Institute for	Location: Bristol, Sheffield, Southampton, UK Setting: Community Population: Patients recruited from general practices with CVD risk score based on QRISK2 $\geq 20\%$ and high BP and with BMI ≥ 30 or smoking habit. Must have access to phone, internet, email.	Intervention: Telehealth in Chronic Disease (TECH). The present study focuses on CVD among all chronic diseases covered by program. Patients received BP monitors. Healthlines, a computerized behavior management system using scripts for lay health advisers to educate patients on CVD risk and lifestyle, drug treatments and side effects, home BP	Intervention effects: Mean effects at 12 months. No difference in cholesterol level or smoking. SBP reduced 2.7 and DBP reduced 2.8 BMI reduced 0.4 Median number of encounters with Healthline 10	Intervention cost per patient per year: £129 Components: Calls with patents, BP Monitors 19 Source: Study records, task scheduling diaries Quality: Good	NHS healthcare cost per patient per year: £10 higher (Intervention £374, Control £364) Components: Hospital and ambulance, drugs, primary care visits Non-NHS cost per patient per year: Private healthcare £50 lower and out-of-pocket costs for patient £15 higher	Cost per QALY gained NHS perspective at 12 months: Incremental healthcare cost per patient including intervention cost: £138 Incremental QALY: 0.012 Cost per QALY gained: £10,859 Cost-effective at £20K threshold

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Health Research (UK) Monetary Values: Reported in 2013 UK pounds	Sample Size: Intervention: 325 Control: 316 Characteristics: Mean age: 67 years Female: 18-21% White: 99% CVD Risk Score: 31% Range of Mean SBP: 147-148 Range of Mean DBP: 80-81 Mean BMI: 31 Diabetes: 20-24% Smoke: 15-19% Time Horizon: Recruitment from December 2012 and July 2013 Outcomes assessed at 12 months.	monitoring and automated feedback, statins, drug adherence with monthly review, and life-style changes. Lay health advisers underwent specific 3-week training. Comparison: Usual care	Mean length of encounter 18 minutes Median number of times participants logged on to the website 14 Median change in treatment: 0 Simulated incremental QALY per patient per year 1 year: 0.011 2 years: 0.013 5 years: 0.016 Lifetime: 0.026 Source: QALY based on EQ-5D-5L 0.012 increase. Improvement in diet and physical activity noted. Physiological outcomes from primary care notes and from direct survey of patients. Quality: Good		Productivity: Patient worksite productivity £24 higher Simulated incremental NHS cost per patient per year: 1 year: £131 2 years: £124 5 years: £107 Lifetime: £55 Productivity not considered for lifetime simulation. Measure Type: DiD Quality: Fair	with probability 0.77 NHS perspective over lifetime: Events and transition probabilities to various states based on CVD risk – myocardial infarction, angina, transient ischemic attack, stroke. Incremental cost per QALY gained (Probability of cost-effectiveness with 20K threshold) 1 year: £11,776 (0.74) 2 years: £9,886 (0.84) 5 years: £6,477 (0.95) lifetime: £2,091 (0.99) Quality: Good Limitations: Intervention effect at 2 years, 5 years, and lifetime assumed with no intervention and no program cost after year 1.

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Author (Year): Fishman et al. (2013) Linked to Green et al. (2008) Design: Modeled from RCT Economic Method: Intervention cost; healthcare cost; cost per QALY gained. Funding Source: National Heart Lung and Blood Institute Monetary Values: Reported in 2009 U.S. dollars.	Location: Western Washington, USA Setting: Primary care clinic Population: Patients aged 25 to 75 years who have, and take medication for, hypertension, excluding patients with existing T2DM and CVD.. Patients' DBP between 90 and 109 mmHg and SBP between 140 and 199 mmHg. Sample Size: Intervention: 261 Control: 258 Characteristics: Mean Age: 59 years Female: 56% White: 79% African American: 8% Asian: 5% Mean SBP: 152 Mean DBP: 89 Time Horizon: Intervention length was 12 months. Modeled over lifetime.	Intervention: Electronic Communications and Home Blood Pressure Monitoring to Improve Blood Pressure Control (e-BP). Patients received home blood pressure monitor and were trained how to use the device and website tools to work with their physician. Pharmacist developed a medication plan in collaboration with physician and followed stepped medication protocol, with final clinical decisions made by the physician. Supervision of pharmacists by senior clinical pharmacist. Pharmacist provided patient-centered behavioral counseling for medication adherence and lifestyle. Communications occurred over the web. Comparison: Usual physician care with website and education materials	Intervention effects: SBP reduced 8.9 mmHg versus control DBP reduced 3.6 mmHg Source: Trial records Measure Type: DiD	Intervention cost per person per year: \$390 Components: Labor, training Source: Study records and pharmacist time logs Quality: Good	Change in healthcare cost per patient per year versus control: \$0 Components: Inpatient, outpatient, ED Measure Type: DiD Source: Medical claims Quality: Good Productivity: NR	Net cost per patient per year: \$390 Quality: Good Net cost per QALY gained: \$2,314 Quality: Good

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Author (Year): Goetzel et al. (2013) Design: Longitudinal with comparison Economic Method: Healthcare cost Funding Source: PPG Industries, Wellness Checkpoint Monetary Values: Reported in 2010 U.S. dollars	Location: National, USA Setting: Worksite at PPG Industries Population: Workers ages 18 to 64 years at 37 U.S. PPG sites with worksite wellness programs. Excluded workers enrolled in HMOs. Sample Size: Intervention size average over 6 years: 8,609 Characteristics: Mean Age: 48 years Female: 25% Salaried workers: 70% Time Horizon: Data from pre-program year 2005, through 2010.	Intervention: Worksite wellness programs at sites with high intensity intervention and high support of local management within PPG Industries. Worksite wellness program focused on blood pressure, coronary artery disease, T2DM, depression, musculoskeletal disorders, and overweight. Interventions led by a multidisciplinary corporate steering committee of medical, health and safety, human resources, benefits, and communication representatives as well as a network of worksite wellness teams. Online system introduced to assess employees' health risk, anonymously, by individual and worksite. Behavioral elements of intervention included smoking cessation, physical activity, lower cholesterol and blood sugar, and self-monitoring blood pressure. Program included health	Intervention effects: High intensity sites achieved higher scores in BP control High intensity sites achieved higher scores in cholesterol control Measure Type: DiD	Intervention cost NR	Change in Healthcare Cost per patient per year: -\$123 Components: Outpatient, inpatient, ED, medications Source: Claims data Measure Type: Pre to post trend Productivity: NR Quality: Fair	NR

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
		promotion to modify risk behaviors, environmental support for healthy choices, annual health campaign with biometric screening. Comparison: Sites within PPG Industries with moderate intensity worksite programs				
Author (Year): Halladay et al. (2017) Design: Program cost evaluation from trial Economic Method: Intervention cost Funding Source: National Heart Lung and blood Institute Monetary Values: Reported in 2010 in U.S. dollars	Location: North Carolina, USA Setting: Primary care clinic Population: Patients in rural primary care practices where there is poor control of blood pressure at population level. Sample Size: Intervention: 1,238 Characteristics: NR Time Horizon: Trial took place from 2010 through 2015.	Intervention: This is a pilot for team-based care for blood pressure control implemented within multiple primary care clinics across North Carolina. One objective was to determine whether team-based care could be implemented in rural economically distressed areas. Quality improvement activities throughout clinic for the general population with hypertension. These included generation of list of hypertensive patients and a quality improvement visit plan for providers to follow at each visit. Training provided to all staff. Patients with	No effectiveness estimates reported	Intervention cost per patient per year: \$54.70 Components: Labor, training, and communication technology for development, implementation, and maintenance. Also include cost of home blood pressure monitors. Source: Tracked during implementation Quality: Good	Healthcare Cost: NR Productivity: NR	NR

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
		uncontrolled hypertension received home blood pressure monitor and phone coaching to change behaviors and lifestyle. Blood pressure control was tracked through EHR. Phone coaching by external vendor. Comparison: None				
Author (Year): He et al. (2017) Linked to Augustovski et al. (2018) Design: RCT Economic Method: Intervention cost and healthcare cost Funding Source: National Institutes of Health Monetary Values: Reported in 2017 U.S. dollars	Location: Multiple locations, Argentina Setting: Primary care centers Population: Patients 21 years or older, living with uncontrolled BP, uninsured, and receiving primary care from the participating centers. Sample Size Intervention: 743 Control: 689 Characteristics: Mean age: 55.8 years Female: 53% Diabetes: 34% HTN: 100% CVD: 12.7% Time Horizon: Study years 2013-2015.	Intervention: Community health worker-led multicomponent intervention with free home BP monitors. 60-min monthly home-visits for the first 6 months and bimonthly home visits for the remaining 18 months of follow-up. Individualized text-messages were also sent out weekly promoting lifestyle changes and reinforcing medication adherence. Training of PCP physicians focusing on standard treatment allocations, and weekly text messages to promote lifestyle changes and medication adherence sent out to participants.	Intervention effects: At 18 months, SBP reduced by 6.6 mmHg DBP reduced by 5.3 mmHg Source: Study records Measure Type: DiD	Intervention Cost per patient over 18 months: \$114.60 Components: Salaries for program coordinators and community health workers, physician training, home visits, BP monitors, and eHealth platform programming. Source: Study records at each center Quality: Good	Healthcare cost per patient over 18 months: Intervention: \$62.20 Control: \$67.60 Difference: -\$5.40, not significant Components: Inpatient, outpatient, medications, labs Source: Primary care center and hospital data, patient questionnaire Measure Type: Post only Productivity: NR Quality: Fair	NR

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
	Intervention length 18 months.	Comparison: Usual care				
Author (Year): Henke et al. (2011) Design: Retrospective cohort Economic Method: Intervention cost and healthcare cost Funding Source: None Monetary Values: Reported in 2009 U.S. dollars	Location: National, USA Setting: Worksite wellness Population: Employees of Johnson and Johnson aged 18-64 years old, continuously enrolled in a health care program offered by the company for at least one year. Employees with pregnancy-related medical care claims, employees not enrolled in prescription drug plan, or with no claims excluded from the sample during the year of the occurrence. Sample Size: Intervention: 31,823 Control: 31,823 Characteristics: Mean age: 39.6 years Female: 45.2% Time Horizon: Analysis years 2002-2008. Ongoing program.	Intervention: Evaluation of Johnson and Johnson's (J&J) health and wellness program on employees' health risks and medical care costs in the third decade of the program's existence. Compared this data to data collected from employees of 16 comparable companies (some of which also have health and wellness programs). Comparison: Employees of propensity matched companies with or without worksite wellness programs.	Intervention effects: From 2005 through 2008, the predicted probability of individuals with high blood pressure decreased in the intervention group by 4.1 compared to no change in the control group. Source: Program and study records Measure Type: DiD	Intervention Cost per patient per year: \$300 Components: On-site fitness centers, reimbursement for exercise expenditures, seasonal fitness challenges, nutrition (Weight Watchers, online weight management programs), lifestyle management (health coaching for blood pressure monitoring, tobacco cessation, blood lipid control), & chronic disease management costs. Source: Program records and enrollment data Quality: Good	Healthcare Cost saved per patient per year: \$565 Components: Inpatient, outpatient, medication Source: Self-insured company records Measure Type: DiD Productivity: NR Quality: Fair	Intervention cost plus healthcare cost averted per patient per year: -\$265 Quality: Fair Limitation: No clinical outcomes reported except at-risk of hypertension. The experience of Johnson & Johnson, a company with a very mature program, thus was contrasted with that of companies that may have only recently introduced wellness programs and, in some cases, may have fashioned their programs after Johnson & Johnson's.

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Author (Year): Hollenbeak et al. (2014) Design: Modeled from RCT Economic Method: Intervention cost; healthcare cost; cost per QALY gained Funding Source: Robert Wood Johnson Foundation, Pfizer Monetary Values: Reported in 2010 U.S. dollars	Location: NR, USA Setting: Primary care clinic Population: African American patients with treated but uncontrolled BP from registry within 2 practices. Ages 40 to 75 years. Required moderate visit adherence and recent lipid panel. Sample Size: Intervention: 136 Control: 144 Characteristics: Mean Age: 61 years Female: 70% African American: 100% Mean SBP: 141 Mean DBP: 81 Mean LDL: 116 T2DM: 56% Time Horizon: Intervention length was 6 months. Modeled over 10 years.	Intervention: Healthy Heart Trial African American peer coaches (CHW) nominated by physicians from patient panel and trained by study staff. CHWs' objective was to engage patients with education about heart disease, risks, and barriers to control or risk factors. CHWs contacted patients every other month for 6 months. Patients received practice-based counseling from two African American medical assistants trained with same materials as CHWs, and in use of computer-based 4-year coronary heart disease risk assessor. Educational brochures and healthy recipes were provided. Comparison: Usual care with education materials	Intervention effects: SBP reduced 6.4 mmHg versus control Source: Trial records Measure Type: DiD 10-year QALY gained: 0.14 Source: Modeled Measure Type: DiD Quality: Good	Intervention cost per person per year: \$722 Components: Labor, training Source: Trial records Quality: Good	Change in healthcare cost: NR Productivity: NR	Net cost per patient over 10 years: \$1,741 Quality: Good Net cost per QALY gained over 10 years: \$10,866 Quality: Good
Author (Year): Hong et al. (2018)	Location: Baltimore, Maryland, USA	Intervention: RED CHiP-Reducing Disparities and	Intervention effects: From trials	Intervention Cost per patient per year: \$375	Healthcare Cost: NR	15-year cost per QALY gained: \$52,850

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Design: Modeled cost per QALY from Quasi-experiment Economic Method: Cost per QALY Funding Source: NR Monetary Values: Reported in 2016 U.S. dollars	Setting: Primary care clinics Population: Telephone recruited of those identified in EMR or from provider referrals at routine clinic visit. Sample Size Intervention: 629 Control: 330 Characteristics: Mean Age: 60 years Female: 58% White: 30% African American: 70% Mean SBP: 148 Mean DBP: 86 Mean Total Cholesterol: 200 Time Horizon: Trials ran from 2012 through 2015. 15-year model.	Controlling Hypertension in Primary Care. Dieticians and pharmacists with physicians targeted self-management behaviors in diet, physical activity, medication adherence, and self-monitoring. In person in primary care clinics. 3 sessions 4 weeks apart for total of 120 minutes. In the trial, 629 patients attended at least 1 session and 245 (39%) completed all 3 sessions. Comparison: Usual care	SBP reduced 9 mmHg DBP reduced 4 mmHg 15-year QALY Intervention: 7.09 Control: 7.05 Difference: 0.05 Source: Clinical indicators from trials. QALY from EQ-5D. Events modeled are CHD death, nonfatal myocardial infarction (MI), fatal stroke, and nonfatal stroke Measure Type: Modeled and from trials Quality: Fair	Components: Fixed costs \$3,189, training for social determinants and cultural competency \$7,500, training for motivational interviewing \$369, salaries registered dietitians (3 full-time) \$165,000, Doctor of pharmacy (0.5 full-time) \$60,000 Source: Trial records Quality: Good	Included in modeled total cost Productivity: NR	90% certainty with threshold at \$100K and 40% certainty with threshold at \$50K. If population was 90% African American, \$48,250/QALY. More cost-effective for older population. Quality: Fair
Author (Year): Houle et al. (2012) Design: Model based on RCTs Economic Method:	Location: Multiple regions, Canada Setting: Various settings from Blood Pressure Lowering Treatment Trialists' Collaboration (BPLTTC)	Intervention: Main trial was SCRIPT-HTN. Delivered by pharmacist-nurse teams at various pharmacy sites. Cardiovascular risk reduction counseling was provided by a nurse-pharmacist team using a hypertension education	Intervention effects: SBP reduction 5.6 mmHg used for model DBP reduction -2.1 mmHg	Intervention Cost per patient per year: \$150.48 Components: Pharmacist cost Source:	Change in healthcare cost per patient per year: \$221 Components: Inpatient Source:	Intervention cost + change in healthcare cost per patient per year: \$70.52 Quality: Fair Limitations:

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Intervention cost and healthcare cost Funding Source: Canadian Institutes of Health Research Frederick Banting and Charles Best Graduate Scholarship, and the Interdisciplinary Chronic Disease Collaboration funded by Alberta Innovates-Health Solutions Monetary Values: Reported in 2011 Canadian dollars	Population: NR Sample Size Intervention: 115 Control: 112 Characteristics: Mean age: 66.2 years Female: 34.8% CVD: 20% T2DM: 100% Dyslipidemia: 55% HTN: 100% CKD: 16.5% Mean SBP: 142.5 Mean DBP: 76.4 Time Horizon: Modeled. Assumed 6-month intervention effect	brochure and counseling for reviewing BP as a risk factor, causes of high BP, importance, and consequences of high BP, explaining the effect of diabetes on high BP, and lifestyle strategies to improve BP. Meeting with physician encouraged and facilitated by pharmacist-nurse team with summary assessment and faxed information to physician. Patients seen at 6-week intervals. Comparison: Usual care	SBP reduction modeled out to stroke, myocardial infarction, heart failure, hospitalization. Events based on 8 trials that had those outcomes and associated reductions in SBP. Source: Multiple trials that achieved reduction in SBP and their recorded events. Modeled and based on trials. Measure Type: DiD	Adapted from US study for Canadian context. Quality: Fair	Cost of events modeled after reduction in SBP achieved in the SCRIPT-HTN trial. Events based on 8 trials that had those outcomes and associated reductions in SBP. Measure Type: Modeled Productivity: NR Quality: Fair	Only inpatient healthcare cost considered
Author (Year): Iles et al. (2014) Design: Pre-post with control Economic Method: Intervention cost	Location: Queensland and Victoria, Australia Setting: Primary care Population: Patients age ≥ 18 years from 3 general practices with one or more stable chronic	Intervention: Practice nurse (PN)-led care for individuals who had one of the three chronic conditions. All PNs in the study were registered nurses working within their scope of practice and not under the direct supervision of GP. Worked from protocols in	No clinical outcomes reported.	Intervention Cost per patient per year: \$128 Components: Practice nurse Source: Claims data Measure Type: Incremental	Change in healthcare cost per patient per year: NR Productivity: NR	NR Limitations: No clinical or effectiveness outcomes reported.

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Funding Source: Australian Research Council Discovery Grant Monetary Values: Reported in 2009 Australian dollars	diseases among T2DM, ischemic heart disease, or HTN. Sample Size: Study years 2008-2009. Intervention: 120 Control: 134 Characteristics: Mean age: 68.5 years Female: 49% CVD: 26% T2DM: 29% HTN: 45% Time Horizon: Intervention length 12 months	a collaborative practice model. If patients in the PN-led care group became unstable, they could be referred to GP care until their disease stabilized and then return to PN-led care. Comparison: Usual care		Quality: Fair		
Author (Year): Isetts et al. (2012) Design: Pre post with control Economic Method: Healthcare cost Funding Source: Allina Health Systems Innovation and University of Minnesota	Location: Minneapolis-St. Paul, Minnesota, USA Setting: Primary care clinics Population: Patients in pilot CMI clinics with chronic diseases. Focus of effectiveness is diabetes. Sample Size Intervention: 823 patients in 4 clinics Control: 38 clinics Characteristics:	Intervention: Pilot Care Model Innovation (CMI) for shared savings contract with payer. Medication Therapy Management (MTM) with team-based patient-centered approach to medication use. Help patients achieve desired treatment goals and resolve drug related problems impeding progress to goals. Care teams consist of physicians, nurses, pharmacists, diabetes educators, dieticians,	Intervention effects: For CMI patients receiving MTM services: Mean of 2.13 MTM encounters. 4135 drug therapy problems resolved composed of: adherence 20%; unnecessary drug 5%; additional or different drug	Intervention Cost: NR Included in healthcare cost estimate	Change in median healthcare cost per patient per month: From Dec 2008 to March 2010 CMI Clinics: \$341 to \$354 Control: \$366 to \$420 Difference: -\$41 Components: NR Source: NR Measure Type: Pre to post	NR Author Notes: Favorable cost outcomes and favorable outcomes for cost sharing contracts in the ACO from CMI pilot caused Fairview Health Services to expand CMI to other 38 clinics. Limitations: No details of clinical outcomes

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Monetary Values: Reported in 2009 U.S. dollars	Age range 15 to 88 years Female: 60% Mean number medical conditions: 6.4 Most common conditions were HTN, dyslipidemia, and diabetes. Time Horizon: Pilot funding began in 2009. Healthcare cost assessed from Dec 2008 through March 2010.	and health coaches. Organized as accountable care organization (ACO). Pharmacist provided MTM consultations, in-person visits, telephone, home visits, or co-visits, conferences to discuss patients not at goal. Collaborative practice agreements for care of patients. Comparison: Usual care in other system clinics	28.5%; dose change 38%; drug reaction 8%. Benchmarks for Diabetes Care: Patients meeting 5 performance benchmarks compared to statewide group (5- year period): increased from 6% to 17.5% Source: Minnesota Community Measurement Program and pilot program data. Measure Type: Pre to post		Productivity: NR Quality: Fair	
Author (Year): Katon et al. (2012) Design: RCT Economic Method: Cost per QALY gained	Location: Washington, USA Setting: Primary care Population: Recruited from 14 primary care practices in Group Health. Patients with diabetes, CHD, or both. One or more of	Intervention: TEAMCare Based on collaborative care for depression, chronic care model, and treat-to-target medication strategy for diabetes. Physician-supervised nurse care manager (NCM) enhance patient self-management, treatment	Intervention effects: SBP change 12-month: -3.4 mmHg 24-month: -1.1 mmHg LDL change 12-month: -9.1 24-month: -0.6	Cost per patient per year: \$1,224 Components: Wages, outreach, administration, recordkeeping, information systems. Physician supervision fixed	Healthcare cost change per patient per year: \$440 Components: Inpatient, outpatient Source: Health plan data	Cost per QALY gained over 24 months: \$1,881 Quality: Good

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Funding Source: No external funds Monetary Values: Reported in 2009 U.S. dollars	HbA1c $\geq$ 8.5%, SBP $>$ 140 mm Hg, or LDL-C level $>$ 130 mg/dL. Depression score of at least 10 on the Patient Health Questionnaire. Sample Size: Intervention: 106 Control: 108 Characteristics: Mean Age: 57.4 years Female: 48% Depression: 100% CHD: 23% T2DM: 89% Mean SBP: 136 Mean LDL: 106.5 Mean A1c: 8.1 White: 75% Some college: 61% Unemployed: 10% Time Horizon: Recruited May 1, 2007 through October 31, 2008. Intervention length 12 months.	intensification, coordination, and continuity of care. NCM worked closely with each patient's PCP. Collaborative goal setting and individualized care plans. Patients educated about SMBP, adherence to medication, diet, and exercise regimens. NCM tracked progress electronic information system and reviewed their caseloads weekly with a consulting psychiatrist and internist or family physician. Telephone calls every 4 to 6 weeks. More frequent contacts or visits for not at target or relapses. Comparison: Usual care	A1c change 12-month: -0.56 24-month: -0.14 Depression SCL-20 score 12-month: -0.41 24-month: -0.24 Depression-free days increased 114 over 24 months QALY increase 0.335 over 24 months Source: Study records Measure Type: DiD Quality: Good	cost of \$100 per patient. Source: Health plan cost accounting system. Quality: Good	Measure Type: DiD Productivity: NR Quality: Good	
Author (Year): Kulchaitanaroaj et al. (2014) Design: 2 RCTs Economic Method: Intervention cost	Location: Multiple Cities, Iowa, USA Setting: Primary care Population: Patients age $\geq$ 21 y with diagnosis of essential hypertension	Intervention: Two clinical trials (Trial A and B) implementing physician-pharmacist collaborative interventions compared with usual care over six months in community-based medical offices in the Midwest, U.S. Trials	Intervention effects: Change in SBP Trial A: -15.38 Trial B: -10.8 Change in DBP Trial A: 4.52 Trial B: -5.09	Incremental cost per patient over 6 months: Trial A: \$281.87 Trial B: \$261.71 Components: Counseling sessions, additional hypertension	Change in healthcare cost: NR Productivity: NR	NR

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Funding Source: NR Monetary Values: Reported in 2013 U.S. dollars	Sample Size: Trial A Intervention: 101 Control: 78 Trial B Intervention: 252 Control: 244 Characteristics: Mean Age Trial A: 59.8 years Trial B: 58.6 years Female Trial A: 57% Trial B: 65% White Trial A: 88.3% Trial B: 90.5% Mean SBP Trial A: 152.4 Trial B: 154.1 Mean DBP Trial A: 85 Trial B: 87 Time Horizon: Trial A was 9 months and Trial B was 6 months.	involved clinical pharmacists who were faculty members in medical offices. They collaborated with primary care physicians to offer counseling sessions dealing with lifestyle modifications for individuals with hypertension and offer medication advice. For trial A - 2 pharmacists visits and 1 phone call. Trial B - 4 pharmacist visits. For both trials, physician visits were scheduled on pharmacists' discretion. Comparison: Usual care	Source: From trials. Measure Type: DiD	medications/change of current hypertension medication. Source: Records from trials Quality: Fair		
Author (Year): Kulchaitanaroaj et al. (2017) Linked to Carter et al. 2008 and Carter et al. 2009 Design: RCTs	Location: Midwest, USA Setting: Modeled for primary care setting Population: Patients for cohort model drawn from RCTs	Intervention: Team-based care co-led by pharmacists and Primary Care Providers (PCPs) located in same clinics. Pharmacist provided recommendations to PCP to address suboptimal therapy in face-to-face	Intervention effects: Effects from RCTs: authors note success of trial, including BP reduction, was due to initiation or dosage change	Incremental cost per patient: \$329.15 Components: Pharmacist time, PCP time, specialist time, in collaboration	Incremental modeled lifetime total healthcare plus intervention cost per patient: \$3817.54 Components: Modeled substantially cost of CVD events. Inpatient,	Cost per QALY gained Lifetime: \$26,808 5-year: \$78,547 10-year: \$39,085 Intervention was cost-effective based on willingness to pay

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Economic Method: Cost per QALY gained Funding Source: No external funds Monetary Values: Reported in 2015 U.S. dollars	Sample Size: Cohort model based on 399 patients from RCTs Characteristics: Mean Age: 56.7 years With CVD: 11.3% Mean SBP 151.4 Mean DBP: 86.9 White: 86% Female: 57.4% Time Horizon: Original RCTs were 6 and 9 months. Modeled over lifetime.	interactions, phone calls, or written communication. Pharmacist counseled patients on medication and lifestyle. Comparison: Usual PCP care	for hypertensive medications. Main modeled RCT outcome: SBP reduction at 6 months: 6.8 mmHg for control and 18.8 mmHg for intervention. Mean QALY increased 0.14. Source: Modeled outcomes were Acute Coronary Syndrome (ACS), heart failure, stroke, death. Utility weights associated with CVD events based on EQ-5D for U.S. communities and MEPS data. Measure Type: DiD Quality: Good	activities, overheads Source: Records from two RCTs Quality: Good	ED, outpatient, medications, nursing home care, home care. Source: Modeled CVD events. HCUP data, Medicare/Medicaid fees, and published studies for unit prices Measure Type: DiD Productivity: NR Quality: Good	of \$50K to \$100K 48.6% of the time under multivariable sensitivity analysis. Sensitivity Analysis: Different profiles of patient cohorts in terms of CVD risks such as BMI and cholesterol. Worst case scenario where SBP reduction maintained only for 24 months. Cost per QALY lower for higher risk patients. Quality: Good
Author (Year): Monahan et al. (2019) Design:	Location: Multiple locations in England, UK Setting:	Intervention: TASMIN4. Physician titration of hypertension medication based on SMBP readings in one	Intervention effects: Change in SBP SMBP: -3.5	Cost over 6 months per patient: SMBP: £57	Healthcare cost per patient over 6-month: NR	Cost per QALY gained over lifetime: SMBP vs Usual: £3,035 (cost £124

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Modeled from RCT Economic Method: Modeled cost per QALY Funding Source: National Institute for Health Research Monetary Values: Reported in 2016 UK pounds	Primary care Population: Patients from 138 general practices. Selected patients age >35 years, with a clinic BP >140/90 mm Hg and willing to self-monitor BP. Sample Size: SMBP: 395 Telemonitoring: 393 Control: 394 Characteristics: Mean age: 67 years Female: 46% to 47% White: 95% Black: 2% Asian: 2% HTN: 100% T2DM: 9% to 10% CVD: <5% Time Horizon: Study years 2014-2015. Intervention length 12 months.	arm, SMBP readings plus telemonitoring in second arm, and based on clinic BP measurements in usual care arm. Only additional team member is nurse who trained patients on use of SMBP (15 minutes) and use of telemonitoring (25 minutes) based on SMS and a web-based telemonitoring server for BP readings entry. Telemonitoring send readings via free SMS text with web-based data entry back-up. Clinicians review both self-monitoring and telemonitoring groups' monthly readings. Physician used clinic readings in usual care arm. Telemonitoring SMS included alerts, warnings, reminders for readings not at goal. Comparison: Usual care with clinic BP readings.	Telemonitoring: -4.7 Change in DBP SMBP; -1.5 Telemonitoring: -1.3 Source: Trial records Measure Type: DiD	Telemonitoring: £71 Usual care: £49 Components: Nurse time, BP monitor and telemonitoring equipment Source: Study records Quality: Good	Healthcare cost included in cost component of cost per QALY gained. Components: All cost components Source: National Health Service tariffs and modeled events. Measure Type: Modeled Productivity: NR Quality: NA	and QALY 0.0407) Telemonitoring v SMBP: £17,424 (cost £302 QALY 0.0173). Cost per QALY gained over 10 years: SMBP v Usual: £9,130 (cost £85 and QALY 0.0093) Telemonitoring v SMBP: £46,793 (cost £188 QALY 0.0040) Quality: Good
Author (Year): Overwyk et al. (2019) Design: Model based on RCTs	Location: National, USA Setting: Primary care Population: Hypothetical individuals 35 years	Intervention: Pharmacist involved team-based care intervention among 3 targeted groups using a microsimulation model designed to estimate cardiovascular event	Intervention effects: Change in SBP: -8.5 mmHg Change in LDL: -8.1 mg/dL	Intervention Cost per patient per year: \$525 Components: Pharmacist and physician time	Healthcare cost per patient over 6-month: NR Included in total cost estimate	5-year Intervention Cost + Change in Healthcare Cost Group 1: \$322 Group 2: \$156 Group 3: \$141

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Economic Method: Intervention cost and healthcare cost Funding Source: Centers for Disease Control and Prevention Monetary Values: Reported in 2012 U.S. dollars	old or older who were divided into three groups depending on their status: Group 1 (newly diagnosed hypertension), Group 2 (persistently uncontrolled blood pressure), Group 3 (treated, but persistently uncontrolled blood pressure). Sample Size: Modeled Characteristics Group 1, Group 2, Group 3 Mean age: NR Female: 52.5%, 57.6%, 58.6% HTN: 100% in all 3 groups CVD: 15.7%, 20%, 20.9% T2DM: 23.1%, 26.5%, 26.6% Medicare: 30.5%, 44.4%, 47.2% Commercial Insurance: 47.4%, 37.8%, 35.9% Mean SBP: 145.3, 153.4, 152.8 Mean LDL: 120.6, 120.4, 119.3 Time Horizon: Modeled for 5- and 10-year horizon.	incidence and associated health care spending in a cross-section of individuals representative of the U.S. population. The intervention was assumed to be on average a 1-hour long intake visit, three 15-minute in-person visits, and eight 15-minute phone visits over 1 year. The total time measured was over 5 years. Comparison: Usual care	Source: Study records Measure Type: Modeled	Source: Model input from Dehmer 2016 Quality: Good	Components: All components of healthcare cost associated with CVD and CVD events Source: Modeled based on literature for unit prices. Measure Type: Modeled Productivity: NR Quality: NA	Limitations: Short duration Quality: Fair

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Author (Year): Panattoni et al. (2018) Design: Program cost evaluation from pilot Economic Method: Intervention cost Funding Source: Gordon and Betty Moore Foundation, Palo Alto Medical Foundation Monetary Values: Reported in 2014 in U.S. dollars	Location: Palo Alto, California, USA Setting: Primary care clinic Population: All patients with hypertension or T2DM. Sample Size: Intervention: 11,873 patients with hypertension or T2DM Characteristics: Mean age: 58 years Female: 48% White: 24% Asian: 32% Hispanic: 7% Other or Unknown racial/ethnic group: 37% Medicare: 28% Commercial insurance: 70% Time Horizon: Planning began in 2010; team-based care pilot completed after 29 months.	Intervention: Team-based care for chronic disease implemented as a pilot in a family and internal medicine primary care clinic. Part of multispecialty medical foundation. Staff included physicians, medical assistants, one pharmacist, one nurse practitioner, and two health coaches. Coaches contacted patients with poor A1c or blood pressure control who had not visited a physician within the past three months to schedule an appointment with physician. Physicians referred selected patients to a health coaches for self-management support or pharmacist for medication management. Comparison: None	No effectiveness estimates reported	Intervention cost per patient per year: \$194 Components: Labor Source: Tracked during implementation Quality: Fair	Healthcare Cost: NR Productivity: NR	NR
Author (Year): Polgreen et al. (2015)	Location: National, USA Setting:	Intervention: Collaboration Among Pharmacist and Physicians to Improve	Intervention Effects:	Intervention cost per patient per year: \$203	Healthcare Cost: NR Productivity:	NR

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Design: RCT Economic Method: Intervention cost Funding Source: National Heart Lung and Blood Institute Monetary Values: Reported in 2013 in U.S. Dollars.	Primary care clinic Population: All patients age ≥ 18 years with uncontrolled hypertension who speak English or Spanish Sample Size: Intervention: 401 Control: 224 Characteristics: Mean age: 61 years Female: 60% African American: 38% Hispanic: 14% Mean SBP: 148.9 Mean DBP: 85.1 Annual income <\$25,000: 49% Time Horizon: Intervention duration was 9 months	Outcomes Now (CAPTION). Study staff identified patients with uncontrolled hypertension. Pharmacist reviewed medical record and followed up with in-person interview to collect information about patients' medication history, knowledge about blood pressure, medication use, barriers to care, and lifestyle. Pharmacists made follow up calls at 4, 6, and 8 weeks to address barriers to care, manage medications, and suggest lifestyle modifications. Pharmacist-physician communications were face to face. Physicians reviewed and accepted, modified, or rejected pharmacist recommendations. Comparison: Usual care	Change in SBP: -6.1 mmHg Change in DBP: -2.9 mmHg	Components: Labor, medications Source: Trial records and average compensation for pharmacists; external survey for physician time. Drug cost based on average wholesale prices. Quality: Fair	NR	
Author (Year): Prezio et al. (2014) Design: Modeled from RCT Economic Method:	Location: Dallas, Texas, USA Setting: Primary care center Population: Selected diabetes patients in existing program for diabetes	Intervention: CoDE Certified and trained <i>promotoras</i> helped patients self-manage their disease with individual case management under direct physician supervision. Glucose	Intervention effects: Change in A1c Relative change: 23.3% reduction in intervention and 13.5%	Intervention Cost per patient per year: First year \$435 Subsequent years \$316 Components: <i>Promotora</i> salary, home glucose	Healthcare cost per patient over 6-month: NR Included in total cost estimate Components: All components	Cost per QALY gained 20-year: \$355 10-year: \$38,726 5-year: \$100,195 Net 20-year cost: \$6,328 Quality:

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Modeled cost per QALY Funding Source: University of Texas, Faith-Health Research-Dallas Monetary Values: Reported in 2012 U.S. dollars	care in primary care center Sample Size: Intervention: 90 Control: 90 (waitlist) Characteristics: Mean age: 47 years Female: 67% Hispanic: 78% African American: 15% Asian: 1% Uninsured: 100% T2DM: 99% Mean SBP: 126 Mean DBP: 78 Mean LDL: 110-5 Mean A1c: 9.5 Time Horizon: Recruitment for RCT started July 2003 and RCT completed in 2006. Intervention length was 12 months and quarterly assessments indefinitely.	monitor and testing strips provided at no charge and patients were trained on use. Food diary with instructions provided. Educated on individualized meal plans and healthy meal preparation. Physician notified if following 3 abnormal glucose readings. <i>Promotora</i> did full foot examination. Educated on lifestyle modifications. Medication changes made by the primary care provider. Comparison: Waitlist	reduction in control Source: From trial data Measure Type: DiD	monitors and strips, physician time including supervision, and patient time Source: Trial records Quality: Fair	Source: Modeled from reduction in A1c Measure Type: Modeled Productivity: NR Quality: NA	Fair
Author (Year): Reiss-Brennan et al. (2016) Design: Longitudinal Economic Method: Intervention cost	Location: Utah and other states, USA Setting: Primary care clinics of large health system Population: Patients age ≥ 18 years with at least 1 outpatient visit	Intervention: Intermountain Mental Health Integration (MHI) program. Team-based care integrating mental and physical health was implemented in some clinics in the	Intervention effects: Odds ratio for BP control: 0.87 Odds ratio for quality of diabetes care: 1.26	Intervention Cost per patient per year: \$192 Components: Labor, communication infrastructure Source:	Change in healthcare cost: -\$115 Components: Inpatient, outpatient, laboratory, radiology Source:	NR Authors state investment costs were less than reduction in payments received by the delivery system. Outcomes. No

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
and healthcare cost Funding Source: Intermountain Healthcare Monetary Values: Assumed reported in 2012 U.S. dollars.	in 2003-2005 and at least 1 visit per year in any healthcare service until 2013 Sample Size Intervention: 63,396 Characteristics: Female: 62% White: 94% Time Horizon: Baseline between 2003 and 2005. Outcomes assessed between 2010 and 2013.	Intermountain Health system. These clinics were classified and recognized as providing team-based care according to an MHI scorecard for MHI care process model. Interdisciplinary clinical teams organized around primary care physician. Standardized process and care and communication organized in common electronic medical record. Outcomes assessed through disease-specific registries. Patient-centered care with community outreach were followed. Comparison: Patients in clinics without MHI	Source: Electronic health records and data from disease registries Measure Type: Post only with comparison	Trial records Quality: Fair	Health system claims data Measure Type: Pre to post Productivity: NR Quality: Good	estimates provided. Notes: Unclear whether change in healthcare cost is per patient per year or event.
Author (Year): Shireman et al. (2016) Design: RCT Economic Method: Intervention cost and partial healthcare cost	Location: Wisconsin, USA Setting: Community pharmacies Population: African American age ≥ 18 y taking at least 1 HTN medication and found to have uncontrolled BP using	Intervention: Team Education and Adherence Monitoring (TEAM) staffed by community pharmacists, pharmacy technicians, with tools for monitoring and improving medication adherence, with feedback to patients and physicians. Invited to baseline and 5 follow-	Intervention effects: Effect measured at 6 months after end of intervention. Change in SBP/DBP: -5.6/- 2.2 Change in % with BP Control: 17.1 pct pt	Cost over 6 months per patient: Total \$104.8 made up of staff time (\$90.06) and tools and supplies (\$14.74) Components: Staff time, tools, and supplies	Healthcare cost per patient over 6-month: \$85.80 Components: HTN Medication Source: Retrospective analysis of pharmacy claims and	Labor cost of additional patient achieving BP control: \$665 Quality: Limited Limitations: Short duration

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Funding Source: National Heart, Lung, and Blood Institute (NHLBI) Monetary Values: Reported in 2007 U.S. dollars	free screening at pharmacy. From 5 Wisconsin cities. Pharmacies were randomized. Sample Size: Intervention: 276 Control: 300 Characteristics: Mean age: 54 years Male: 38% African American: 100% T2DM: 25% Less than High School: 24% Household income less than \$20K: 45% Mean SBP 151 Mean DBP: 92 Uncontrolled BP: 100% Missed ≥ 1 dose last week: 25% Time Horizon: Enrollment December 2006 – August 2007. Intervention length 6 months.	up visits with pharmacist. Pharmacist followed algorithms to address barriers and checklists to track barriers. Technicians performed administrative and record-keeping tasks. One pharmacist and one technician from each pharmacy received training (1-hour self-study and 7-hour joint workshop). Comparison: Usual care with 14-page guide on HTN, pamphlet on HTN in African Americans, cards to record BP at baseline and follow-up.	Change in adherence: 23.6 (based on proportion of days covered $\geq 80\%$) Source: Trial records Measure Type: DiD	Source: Study and per patient meeting records. Wisconsin wages for personnel time. Quality: Good	fills. Valued using Red Book. Measure Type: Post intervention v control Productivity: NR Other Healthcare Utilization: Study found no substantial difference in utilization of inpatient, specialist/PCP visits, ED visits. Quality: Limited	
Author (Year): Siaw et al. (2017) Design: RCT	Location: Singapore, Singapore Setting: Outpatient healthcare institutions	Intervention: Multidisciplinary collaborative approach to patient care. For management of Asian patients with type 2 diabetes.	Intervention effects: Change in SBP: -3.8 mmHg Change in A1c: -0.5	Intervention Cost NR Included in healthcare cost estimate	Change in Healthcare Cost plus Intervention Cost over 6-months: Intervention: \$516.77 Control: \$607.78 Difference: -\$91.01	NR Limitation: No inpatient cost estimate

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Economic Method: Intervention cost and healthcare cost Funding Source: NR Monetary Values: Reported in 2014 U.S. dollars	Population: Recruited adult patients aged > 21 years with uncontrolled type 2 diabetes (HbA1C >7%); on 5 or more chronic medications; and comorbidities. Sample Size: Intervention: 214 Control: 197 Characteristics: Mean age: 59.2 years Female: 47.7% Chinese: 58.9% Malay: 19.2% Indian: 20.6% Less than High School: 39.2% T2DM: 100% Mean A1c: 8.6% Mean SBP: 129.2 Time Horizon: Study dates not reported. Intervention length is 6 months.	Each face-to-face session with the clinical pharmacists, diabetes nurse educators and dietitians lasted between 20 and 30 minutes The average number of face-to-face visits and telephone consults with a pharmacist was four. The average number of physician visits per patient over the 6-month period was two visits for the intervention arm Comparison: Usual care with potential for referrals.	Source: Trial records Measure Type DiD		Components: Outpatient, labs, medications Source: Healthcare institutions electronic database Measure Type: DiD Productivity: NR Quality: Fair	
Author (Year): Simpson et al. (2015) Design: Based on RCTs Economic Method:	Location: Edmonton, Canada Setting: Primary care Population: Patients selected with diagnosis of T2DM from 5 clinics	Intervention: Patients met pharmacist who conducted a medication history and limited physical examination, which included blood pressure measurement. Pharmacist made	Intervention effects: Change in SBP: -6.0 mmHg Change in DBP: -1.0 mmHg Change in LDL:	Intervention cost per patient over 6 months: \$226 Components: Pharmacist time Source:	Change in Healthcare Cost per patient per year: -\$416 Components: Inpatient, ED, Outpatient, Specialty visits, Medications	Intervention Cost plus Change in Healthcare Cost per patient per year: -\$158

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Cost per QALY Funding Source: Canadian Diabetes Association, Institute of Health Economics, and Alberta Heritage Foundation for Medical Research Monetary Values: Reported in 2014 Canadian dollars	in primary care network Sample Size: Intervention: 131 Control: 129 Characteristics: Mean age: 56.5 years Female: 59% T2DM: 100% Atrial Fibrillation: 2.9% Mean SBP: 130 Mean DBP: 74.5 Mean LDL: 2.35 Mean A1c: 7 Time Horizon: Study dates not reported. Intervention length is 12 months.	guidelines-based recommendations to physician based on patient's medication regimen and medical history. Follow-up by pharmacists to address any issues with medication management, frequency and content at discretion of pharmacist, physician, and patient. Estimated contacts were 1.9 hours of pharmacist time over 12 months, made up of baseline 0.3 hours, 2 follow-ups 1.8 hours. Comparison: Usual care	-0.02 Change in A1c: 0.0 CVD 10-year Risk using UKPDS Risk Engine score reduced 1.0 Source: Trial records Measure Type: DiD	Pharmacist record of encounters Quality: Fair	Source: Self-reported counts multiplied by area prices for inpatient and ED. Pharmacy records for medications Measure Type: DiD Productivity: NR Quality: Fair	Cost per QALY gained over 12 months: \$31,500 Quality: Good Limitation: Time horizon of 12 months for cost-effectiveness.
Author (Year): Stoddart et al. (2013) Linked to McKinstry et al. (2013) Design: RCT Economic Method: Intervention cost and healthcare cost Funding Source:	Location: Lothian, Scotland, UK Setting: Recruit from 20 primary clinics Population: Ambulatory SBP/DBP $\geq 135/85$ and managed in primary care Sample Size: Intervention: 200 Control: 201 Characteristics: Practices ranged in	Intervention: (HITS) trial. Nurses provided training in use of equipment: home-based automated BP device linked via Bluetooth to cell phone which transmits to central server. Patients and physicians log on to website and see data. Can send SMS text/emails to patients. Comparison: In usual care (U), those with high BP advised to consult with Primary	Intervention effects: BP based on ambulatory measurement from baseline to 6 months (HBP vs Usual) Reduction in adjusted BP SBP 4.3 mmHg lower DBP 2.3 mmHg lower Source: Trial records	Intervention cost per patient over 6 months: £70.77 Components: Initial device use training £12.00 per patient one time only. All others were per patient per month, as follows: HBPM device £1.20 (£53.11 each) Mobile phone £1.44 (£48.48 each)	Total 6-month healthcare cost per patient excluding inpatient: HBP: £216.41 Usual: £177.95 Difference: £38.46 Inpatient was higher in HBP by £105.47 and by £16.56 with outliers removed. Components: Inpatient, outpatient, medications, ED Source:	Healthcare cost per patient without inpatient plus program cost HBP: £287.18 Usual: £177.95 Difference: £109.23 Cost per unit reduction in SBP was £25.56 and for DBP was £47.49 Author Conclusion: The

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
BUPA Foundation with additional support from the High Blood pressure Foundation and NHS Monetary Values: Reported in 2014 UK pounds	SES from deprived to affluent. Mean age: 60.5 years Female: 40% Mean SBP: 152.4 Mean DBP: 89.9 Median doses of HTN meds: 1.5 Time Horizon: Recruitment ended 03/11/2009. Intervention length was 6 months.	Care Provider and target SBP/DBP	Measure Type: DiD	Server hosting £0.42 Web hosting £2.59 Sim card £1.98 Nurse time £2.17. Source: Local pricing and invoices. Quality: Good	Patient records. Inpatient stays were collected but details regarding nature of admission not recorded. Productivity: NR Quality: Good	HBP intervention cost the NHS more than usual care but was more effective than usual care in reducing BP. Limitation: No baseline cost captured.
Author (Year): Twiner et al. (2017) Design: RCT Economic Method: Cost per QALY Funding Source: NR Monetary Values: Reported in 2011 U.S. dollars	Location: Detroit, Michigan, USA Setting: Hypertension clinic and ED Population: Convenience sample drawn from patients seen in Emergency Department of tertiary academic medical center with SBP/SBP $\geq 140/90$. Excluded existing CVD-CHD and those being actively treated in primary care. Those with subclinical hypertensive heart disease (SHHD) randomized. SHHD defined as left ventricular (LV)	Intervention: Patients checked with echocardiogram and those with SHHD (defined in eligibility) were randomized. Initial visit for BP measurement and record of medical history. Subsequent visits at 3, 6, 9, 12 months. Physician assistant measured BP every visit. Team of nurse practitioner and physician assistant titrated hypertension therapy. Patient educated on medication adherence at each visit. Telephone reminders for visits. All medication costs paid by study. Echocardiogram to determine SHHD at 12	Intervention effects: Of 88 completing protocols, 11% had SHHD regression, 23% reversal of LV hypertrophy, 35% had BP control. QALY based on 0.87 without chronic heart failure and 0.71 with chronic heart failure. Source: Study records and modeling Quality: Fair	Intervention cost: NR Intervention cost included in healthcare cost estimate.	Healthcare Cost per patient per year: \$897.13 Components: Medication: \$43,778 labs: \$9,158 echocardiogram: \$29,515 Clinic: \$32,380 Time: \$2,339 Travel: \$1,740. Source: Study records and patient survey Productivity: NR Quality: Fair	Cost per QALY gained: \$35,865 Quality: Fair Limitation: Cost per QALY estimated within 1-year trial.

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
	hypertrophy, LV systolic dysfunction, or diastolic dysfunction. Sample Size: Intervention: 58 Control: 65 Characteristics: Mean age: 49.2 years Female: 65% African American: 95% HTN: 100% Mean SBP 151.2 Mean DBP: 97.2 Time Horizon: Recruitment November 2008 through April 2010. Intervention length was 12 months.	months. Follow-up every 3 months over 1 year. Comparison: NR				
Author (Year): Wagner et al. (2016) Design: RCT Economic Method: Intervention cost and healthcare cost Funding Source: Gordon and Betty Moore Foundation	Location: San Francisco, California, USA Setting: Primary care Population: Patients (1) carried a diagnosis of diabetes and had an HbA1c $\geq 8.0\%$ within the previous year or had not had their HbA1c measured in the past 12 months; (2) their most recent systolic blood pressure (SBP)	Intervention: Health coaches helped with self-management skills for diabetes, hypertension, and hyperlipidemia; provided social and emotional support; assisted with lifestyle change; facilitated medication understanding and adherence; navigated the clinic; addressed patient barriers to care; and helped access community resources.	Intervention effects: Change in SBP: -8.6 mmHg Change in LDL: -27.9 Change in A1c: -1.2 Source: Study records Measure Type: DiD	Intervention Cost per patient per year: \$489 Components: Labor, training, supplies, and space Source: Study reports and forms Quality: Good	Change in Healthcare Cost per patient per year: -\$121 Components: Inpatient, outpatient, medications, ED Source: Patient records. Inpatient stays were collected but details regarding nature of admission not recorded. Measure Type: DiD	NR Limitation: No baseline cost captured.

Study Information	Study and Population Characteristics	Trial Name Intervention & Comparison	Effectiveness	Intervention Costs	Healthcare Cost Averted Productivity Loss Averted	Cost-effectiveness, Cost-benefit, Net Cost, or ROI
Monetary Values: Reported in 2013 U.S. dollars	was ≥ 140 mmHg and was within the past 12 months; or (3) had calculated low density lipoprotein (LDL) ≥ 160 (or ≥ 100 if diabetic) within the last year or had not had their LDL measured in the past 12 months. Sample Size: Intervention: 224 Control: 221 Characteristics: Mean age: 52.7 years Female: 55% Latino: 70.1% African American: 19% White: 2.5% Asian: 4.1% Less than High School: 57.1% Unemployed: 13.8% Mean SBP: 157.7 Mean LDL: 146.3 Mean A1c: 9.8 Time Horizon: Study years 2011-2012 Intervention length was 12 months.	Multiple visits depending on patient. Comparison: Usual care			Productivity: NR Quality: Good	