Strategies to Increase Health System Referrals to Chronic Disease Prevention and Management Programs

Multiple Strategies

Multiple referral strategies include the following combinations:

- Provider Education + Process Change
- Provider Education + System Change
- System Change + Process Change
- Provider Education + Process Change + System Change

Refer to Key Takeaways for more information

CDC U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

National Center for Chronic Disease Prevention and Health Promotion
Division of Diabetes Translation

Purpose

This resource describes Multiple Strategies that can be used to increase health system referrals to chronic disease prevention and management programs or preventive services. Health system referrals are a process by which a health care provider recommends that a patient receives a specific service or attends a specific program delivered by another entity (clinical or community based).

MULTIPLE STRATEGIES include interventions that use a combination of at least two of the following referral strategy types: Provider Education, System Change, and Process Change.

Who Is This For?

This resource is for organizations working to increase health system referrals to evidence-based chronic disease prevention and management programs and preventive services, such as the National Diabetes Prevention Program (National DPP) and diabetes self-management education and support (DSMES) services.

These organizations could include:

- State and local health departments
- Chronic disease programs
- Community-based organizations and health centers
- Health systems

How to Use This Document

This resource:

- Contains specific strategies within the Multiple Strategies type.
- Describes strategies that show promising or emerging evidence for effectiveness if they represent potentially valuable approaches for implementation.
- Links to additional documents that provide more details on the other specific strategy types, including strategy spotlights and implementation considerations.
- Categorizes the evidence for whether the specific strategy increased referrals. Categories include:

***Strong** Evidence*	***Promising** Evidence*	***Emerging** Evidence*
There was enough high-quality evidence to conclude that the strategies in this category increased health system referrals.	There was enough evidence to conclude that these strategies increased health system referrals despite potential weaknesses in the evidence.	There was not enough evidence to conclude that these strategies increased health system referrals. Programs intending to use these strategies could evaluate their effectiveness within their respective health systems.

Provider Education includes strategies that focus on health care staff education or training, such as dissemination of referral guidelines or provider audit and feedback. Specific Provider Education strategies are as follows:

- **Formal Training or Professional Development:** Health care providers attend workshops or other trainings to learn about when and how to make referrals, build their knowledge and skills, or learn how to incorporate a formal referral protocol into their clinical practice.
- **Educational Material:** Health care providers receive marketing materials, guidance documents, resources, tools, and templates to facilitate referrals.
- **Audit and Feedback:** A third party reviews provider referral behaviors, delivers feedback on referral progress, and determines whether the provider is making appropriate referrals.
- **Academic Detailing:** Health care providers receive university or noncommercial educational outreach.
- **Individual Consultation:** Health care providers receive education consultations to review strategies, tools, guidelines, and recommendations aimed at increasing referrals to programs or preventive services.

System Change includes large-scale strategies that involve the movement of health staff, expansion of roles for existing staff, integration of nontraditional staff into the care team, relocation of clinics, or financial arrangements for referrals, such as incentives. Specific System Change strategies are as follows:

- **Team-Based Care:** Adding new staff to the health care team or expanding the role of existing staff to facilitate referrals to chronic disease programs or preventive services within their health system. Team-Based Care can also mean adding trained staff to implement new patient-focused activities.
- **Addition of Clinics:** Adding a specialty clinic in a primary care setting to facilitate referrals to chronic disease programs or preventive services.
- **Fax Referral Programs:** The referring health care provider completes a fax referral form with the patient and then faxes the form to the program.
- **Regional Outreach Specialists:** Specialists are assigned to specific geographic regions to assist health systems in establishing referral programs.
- **Pay-for-Performance:** Offering financial incentives to referring health care providers for meeting specific referral performance measures.
- **Operating Costs:** Providing upfront costs or partial funding to health systems to support the referral systems they set up.

Process Change includes small-scale strategies that involve some aspect of the individual referral process, such as introducing electronic referral systems, bi-directional referrals, and automatic referrals. Specific Process Change strategies are as follows:

- **Decision Support:** Using prompts, alerts, reminders, or screening and treatment algorithms to help health care providers make referrals.
- **Automatic Referral:** Adopting a process that triggers a referral based on specific patient criteria without the health care provider making the decision to refer.
- **Electronic Referral:** Referrals that are electronically transmitted (e.g., through email or electronic health record [EHR]).
- **Bi-Directional Referral:** Information (a referral) goes from the health care provider to the program or service, and feedback goes from the program or service back to the health care provider.
- **Referral Letters:** Patients receive a mailed letter from their health care provider referring them to a program or service.
- **Investments in IT:** Health systems implement new electronic tools or health IT solutions to support and streamline the referral process.

***Strong** Evidence*

Provider Education + Process Change

This strategy is a combination of a Provider Education strategy and a Process Change strategy.

The following example of a Provider Education + Process Change strategy combines **Provider Education** and **Electronic Referrals**.

Strategy Spotlight #1

Provider Education and eReferrals to Increase Referrals to the National Diabetes Prevention Program

PURPOSE	To facilitate and sustain patient referrals to the National DPP lifestyle change program via provider education combined with e-referrals added to the EHR system
PATIENT POPULATION	Adult patients with prediabetes eligible for the National DPP (n = 75)
PARTICIPATING STAFF	Medical directors and clinical staff at Federally Qualified Health Centers (FQHCs)
INTERVENTION	Referral orders for the "YMCA DPP" were added to the EHR system for providers to complete, combined with formal presentations to the medical directors and clinical staff at the participating clinics on the modifications made to the EHR system.
PROGRAM OR SERVICE REFERRED TO	National DPP lifestyle change program
SETTING	Six FQHCs affiliated with the Bronx Collective Action to Transform Community Health (CATCH) partnership in the Bronx, NY, USA
INTERVENTION LENGTH	2.5 years

IMPACT ON REFERRALS

Patient referrals increased after the EHR system modification and provider education intervention.

1 to 3

Increase in average patient referrals per month in the first year ($p < 0.05$).

1 to 6

Increase in average patient referrals per month in the second year (once the provider educational component was completed) ($p < 0.05$).

***Strong** Evidence*

Strategy Spotlight #2

Nurse Training and Screening Tools to Increase Referrals to Dietary or Physical Activity Interventions

PURPOSE	To examine referrals to dietary or physical activity interventions based on a community nurse intervention, which included training nurses and integrating standardized screening tools and prompts into existing processes
PATIENT POPULATION	Adults with chronic diseases referred to community nursing services (n = 804)
PARTICIPATING STAFF	Community health nurses
INTERVENTION	This intervention included a 1-day training program for community nurses, standardized screening tools and prompts that were integrated into the assessment process used by nurses, and a local service referral directory and educational resources for each nursing team to use with patients.
PROGRAM OR SERVICE REFERRED TO	Brief lifestyle change interventions related to diet, physical activity, or risky alcohol consumption
SETTING	Community locations, including patients' homes, in New South Wales, Australia
INTERVENTION LENGTH	1 year

IMPACT ON REFERRALS

Referrals increased across all three types of lifestyle change programs.

16%

Referrals to diet programs increased to 16% from 10% at baseline ($p < 0.05$).

21%

Referrals to physical activity programs increased to 21% from 6% at baseline ($p < 0.05$).

7%

Referrals to alcohol reduction programs increased to 7% from 1% at baseline ($p < 0.05$).

There were no changes in referrals from community nurses who had not yet received the intervention.

Provider Education + System Change

This strategy is a combination of a Provider Education strategy and a System Change strategy.

The following example of a Provider Education + System Change strategy combines **Provider Education, Educational Materials**, and **Team-Based Care**.

Strategy Spotlight

Increasing Referrals to Health Coaching for Patients with Diabetes and/or Hypertension

PURPOSE	To test a formal training and team-based care strategy to increase referrals to health coaches to help patients manage their chronic diseases
PATIENT POPULATION	Patients with diabetes, hypertension, or both (n = 1,313)
PARTICIPATING STAFF	Health coaches and primary care physicians
INTERVENTION	Two health coaches and a supervising nurse practitioner were integrated into an existing health care team, and providers were educated about how to refer patients to them. Health coaches received 40 hours of training on chronic disease care, motivational interviewing, goal setting, documentation, identifying barriers, and professional boundaries, and primary care physicians received an introduction to health coaches, explanation of criteria for referrals to a health coach, and specific language to use. Refresher trainings at department meetings reminded primary care physicians how and when to make referrals and to share stories of patients using the health coach program.
PROGRAM OR SERVICE REFERRED TO	Health coaches for chronic disease management education
SETTING	Multispecialty health clinic
INTERVENTION LENGTH	1 year

IMPACT ON REFERRALS

The referral strategy was significantly related to cardiac rehabilitation referral and enrollment.

24%

of eligible patients were referred to a health coach.

55%

of patients who were referred to a health coach attended at least one health coach appointment.

System Change + Process Change

This strategy is a combination of a System Change strategy and a Process Change strategy.

The following example of a System Change + Process Change multiple strategy type combines **Team-Based Care** with **Decision Support**.

Strategy Spotlight

[Transitioning Stroke Patients Into Follow-Up Care]

PURPOSE	To improve the post-stroke patient discharge process
PATIENT POPULATION	Stroke patients in the hospital (n = 226)
PARTICIPATING STAFF	A case manager, a social worker, a physical therapist, an occupational therapist, a speech and language pathologist, charge nurses, and liaisons from each of the follow-up care programs
INTERVENTION	The Neurology Stroke Service established a multidisciplinary discharge huddle to plan for patient discharge, identify follow-up care placement options, identify and remove barriers to discharge, and organize follow-up care resources. Staff also received either phones with texting capabilities or tablet computers to support management of referrals to stroke rehab and follow-up care, additions to patient charts, communication about discharge recommendations, and increased communication.
PROGRAM OR SERVICE REFERRED TO	Cardiac or stroke rehabilitation
SETTING	Hospital
INTERVENTION LENGTH	3 months

IMPACT ON REFERRALS

The intervention increased the number of referrals to affiliated care partners for post-stroke patients discharged from the hospital.

28%

of patients were referred to affiliated care partners after discharge, compared to 18% of patients at baseline ($p < 0.05$).

35%

of patients were sent home without services, compared to 47% at baseline ($p < 0.01$).

Provider Education + Process Change + System Change

This strategy combines a Provider Education strategy, a Process Change strategy, and a System Change strategy.

The following example of a Provider Education + Process Change + System Change multiple strategy type combines **Formal Training or Professional Development, Decision Support, Fax Referrals, Bi-Directional Referrals**, and **Team-Based Care**.

Strategy Spotlight

Practice Redesign Intervention to Improve the Quality of Dementia Care

PURPOSE	To determine whether a practice redesign intervention coupled with referrals to local Alzheimer's Association chapters could improve the quality of dementia care
PATIENT POPULATION	Older adult patients with dementia (n = 121)
PARTICIPATING STAFF	Primary care physicians and office staff
INTERVENTION	This multipronged strategy included decision support with prompts to address dementia with the appropriate data collection, diagnostics, and follow-up care; a fax referral form to local Alzheimer's Association chapters; a response form to support bi-directional information; and training for physicians and office staff on incorporating recommended processes into patient visits.
PROGRAM OR SERVICE REFERRED TO	Alzheimer's and dementia care
SETTING	Community-based physician practices in California and Washington State, USA
INTERVENTION LENGTH	11 months

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IMPACT ON REFERRALS

The intervention increased referrals of patients to Alzheimer's Association chapters.

17%

of eligible patients were referred to Alzheimer's Association chapters at follow-up, compared to 0% of patients at baseline ($p < 0.05$).

Compared to baseline,
patients were more likely to receive counseling about

- **Driving** (50% versus 14%, $p < 0.05$)
- **Caregiver counseling** (100% versus 15%, $p < 0.05$)
- **Specification of a surrogate decision-maker** (75% versus 44%, $p < 0.05$)

Implementation Considerations for Multiple Strategies

Overall, Provider Education + Process Change strategies demonstrate increases in referrals.

- **The most common combination of specific Provider Education + Process Change strategies was Formal Training or Professional Development coupled with Decision Support.**
- **Consider additional opportunities to evaluate other combinations of strategy types,** as less is known about whether they will increase referrals.
- **Primary care settings were the most common setting for interventions involving Multiple Strategies**. Other settings may work as well, but less is known about them.
- **Understand referral practices in the specific implementation setting and tailor strategies to the referring providers.**
- **Physicians and nurses were the most common referring providers**. Although other members of the health care team, including nonclinical staff, may also serve as referring providers, less is known about their roles.
- **Consider implementing multiple strategies with an awareness of provider needs to help prevent overwhelming demands on providers and existing workflows.**
- **Evaluate evidence of Multiple Strategies for additional evidence of increasing referrals in specific populations**. Most studies did not report on patient characteristics, and therefore, the effectiveness of Multiple Strategies at increasing referrals for specific populations is not known.

Related Resources

For a high-level overview of all the referral strategies, refer to *Strategies to Increase Health System Referrals to Chronic Disease Prevention and Management Programs: Key Takeaways from a Systematic Review*.

For detailed findings on all the referral strategies from a systematic review of the literature, refer to *Strategies to Increase Health System Referrals to Chronic Disease Prevention and Management Programs*.

References

Learn more about the study characteristics of Multiple Strategy references.

NOTE

* References with an asterisk indicate studies that were included in determinations of whether specific strategies had evidence of increasing health system referrals. Noncomparative studies were excluded from the effectiveness analysis.

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