



City Health Information

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IMPLEMENTING PANEL MANAGEMENT TO IMPROVE PATIENT CARE

- Panel management targets groups of patients with similar needs to improve their quality of care.
- Panel management can enable providers to optimize patient flow and schedule important follow-up visits.
- Electronic health records and systematic patient outreach make panel management feasible for primary care practices.

Chronic conditions such as diabetes, hypertension, and high cholesterol lead to preventable deaths and high utilization of the health care system. In 2009 in New York City (NYC), cardiovascular disease—including hypertension—caused 22,950 deaths, and diabetes caused 1,690 deaths.¹

Improvements in the use of clinical preventive services, particularly for cardiovascular disease, could prevent thousands of deaths annually in the United States.² However, physicians cannot address all preventive and chronic care needs in the current model of care delivery, where patients are seen for acute visits and periodic preventive health evaluations.^{3,4} Only 50% of recommended evidence-based care is actually delivered,⁵ and it would take an estimated

10.6 hours each workday for a physician to deliver comprehensive evidence-based care to a typical provider's patients with chronic conditions.³

Panel management can increase efficiency by facilitating a team-based approach in which staff conduct targeted patient outreach to arrange planned visits, improving delivery of both preventive and chronic care.⁶

WHAT IS PANEL MANAGEMENT?

Panel management is a system that targets groups of patients with similar needs to improve their quality of care and health outcomes. With this approach, providers systematically identify groups of patients at risk or with gaps in care to enhance preventive care and overall management of chronic conditions.⁶⁻⁹ Providers and their staff can use targeted patient outreach to improve follow-up care, and then monitor indicators of care delivery and the corresponding outcomes. For example, they can track the percentage of patients with uncontrolled hypertension receiving intensified treatment, and then monitor the percentage of patients who achieve optimal blood pressure levels.

PANEL MANAGEMENT IMPROVES CARE DELIVERY AND OUTCOMES

Panel management-type approaches have been effective in helping improve delivery of preventive and chronic care for diabetes and cardiovascular disease.¹⁰⁻¹⁶



A registry-based diabetes care system used in primary care practices increased in 2 years the percentage of patients undergoing retinal examinations, microalbuminuria testing, and immunizations by 33%, 28%, and 16%, respectively.¹³ In a randomized study of providers caring for patients with diabetes, rates of A1C monitoring within 6 months and LDL cholesterol monitoring within 12 months were 62% and 76% among patients whose providers used a registry, compared with 48% and 64% among patients whose providers did not use a registry.¹⁴

The panel management model can also improve health outcomes. In an underserved population seeking care at federally supported health clinics, a significantly increased number of patients met clinical targets for LDL cholesterol with use of a registry after 1 year.¹⁵ A private clinic saw a 20% increase in the percentage of patients with diabetes who achieved LDL cholesterol <130 g/dL after 4 years of using a registry and implementing other quality improvement strategies (see **Case Study**, page 11).^{10,11}

A panel management approach to preventive care increased key childhood testing rates. Using strategies similar to those outlined in the case study, in 1 year, a practice increased immunizations for 1-year-olds from 70% to more than 90%, exceeding Healthy People 2010 goals. In 2 years, lead testing of children aged 12 to 23 months increased from 25% to 75%.¹¹

ELECTRONIC HEALTH RECORDS FACILITATE PANEL MANAGEMENT AND IMPROVE EFFICIENCY

Electronic health records (EHR) systems can provide practices, including small practices, with tools to identify patients needing follow-up, routinely monitor delivery of care, and improve patient flow.^{10,11,17,18} Because of the potential benefits that EHRs offer patients and providers, the federal government offers financial incentives to providers whose use of EHRs meets certain criteria (defined as “meaningful use”). In New York City, the NYC Regional Electronic Adoption Center for Health (NYC REACH) assists providers in adopting EHRs and provides training to help EHR users achieve the meaningful use criteria for federal incentives (**Resources**). Contact pcip@health.nyc.gov or call 311 for more information on how NYC REACH can support your adoption of an EHR system.

IMPLEMENTING PANEL MANAGEMENT

Using an EHR system’s reporting feature (see **Figure**, page 11), identify a group of patients with certain conditions (eg, diabetes, hypertension, high cholesterol) or in a specific population (eg, approaching 1 year of age for a childhood immunization program). Consult guidelines for managing chronic disease or delivering preventive care (**Resources**) and determine your practice’s current level of performance—for example, the percentage of patients with asthma who have received an influenza vaccine. Decide which condition or preventive measure to address and establish a performance goal and target date (eg, 75% of patients with hypertension will be well controlled in 9 months, or 80% of patients with asthma will receive an influenza vaccine during the next flu season). Select an evidence-based intervention and work with your staff to agree on a protocol that will help you implement the intervention in your practice (see **Case Study**).

Panel management is best implemented using a team-based approach. Engage your practice staff and assign responsibilities so your staff can^{10,11}:

- Develop data queries to identify a target group of at-risk patients (see **Box** below).

IDENTIFYING TARGET PATIENTS: SAMPLE QUERIES

- Patients with ischemic vascular disease who have not had an office visit in the previous 6 months and have no appointment scheduled in the next month.
- Patients with a blood pressure reading of 140/90 mm Hg or greater, but not diabetes or chronic kidney disease, who have not had an office visit in the previous 3 months and have no appointment scheduled in the next month.
- Patients with a blood pressure reading of 130/80 mm Hg or greater who have diabetes and/or chronic kidney disease, who have not had an office visit in the previous 3 months, and who have no appointment scheduled in the next month.
- Patients with LDL cholesterol levels ≥ 190 mg/dL who have not had an office visit in the previous 6 months and have no appointment scheduled in the next month.
- Patients with diabetes and a body mass index of 30 or greater who have not had an office visit in the previous 6 months and have no appointment scheduled in the next month.

For information on treatment guidelines, see **Resources—Guidelines for Preventive Care and Chronic Disease Management**. Add or adjust panel management queries to fit the needs of your patient population and practice.

FIGURE. SAMPLE EHR-DERIVED PATIENT LIST

The screenshot shows an EHR interface with several tabs: Encounters, Structured Data, Saved Reports, and Reports. Under 'Structured Data', there are sub-tabs for Vitals, Labs / DI, ICD, and Rx. The 'Vitals' tab is active, showing various vital signs with checkboxes and input fields. A callout box points to the 'BP (SYS/DIA)' field, which is set to '≥140/≥90'. Another callout points to the date range '1 / 1 / 2010' to '12 / 31 / 2010'. Below the filters is a table of patient data with columns: Letter, Patient Name, DOB, Sex, Age, Medical Record, and Acc #. A callout points to the 'Letter' column, indicating that letters are automatically generated for selected patients. Another callout points to the patient list, indicating it is a list of patients with BP ≥140/≥90.

Letter	Patient Name	DOB	Sex	Age	Medical Record	Acc #
<input checked="" type="checkbox"/>	Marrero, Rafael	11/10/1952	M	58	123456	
<input checked="" type="checkbox"/>	Smith, Jane	09/03/1932	F	78	325035	
<input checked="" type="checkbox"/>	Ruiz, John	08/29/1959	M	51	499787	
<input checked="" type="checkbox"/>	Quinn, Maria	01/22/1948	F	63	662490	

PANEL MANAGEMENT CASE STUDY^{10,11}

A medical clinic serving an inner-city population implemented an EHR-based quality improvement program for approximately 500 patients with diabetes. Using existing staff, the project leadership:

- Selected goals based on the National Committee for Quality Assurance's Diabetes Physician Recognition Program.⁹
- Named physician and nurse champions to spearhead the project.
- Set realistic, incremental goals for patients (eg, A1C levels) and providers (eg, documented foot exams).
- Designed and ran queries to generate the list of target patients.
- Assigned nurses to review the list and contact patients who would benefit from follow-up care.
- Educated patients about the project's rationale, goals, and benefits.
- Offered incentives to patients (pins for A1C <8%) and providers (socks or key chains for those who conducted documented foot exams for 50% of their panels).
- Regularly monitored patient adherence.
- Monitored program progress and then applied the model to other patient groups.

Results: From 2003 to 2007, LDL cholesterol monitoring every 2 years increased from approximately 60% to more than 90% and documented compliance with foot exams rose from less than 25% to nearly 80%. The percentages of patients with LDL <130 g/dL and A1C levels <8% increased by approximately 20% and 10%, respectively.

⁹ Now known as the Diabetes Recognition Program.

- Generate a call or mail list for patient follow-up.
- Create outreach "scripts" to use when calling patients to encourage them to seek follow-up care.
- Contact patients by telephone or letter.
- Give preappointment instructions to patients (eg, fast for labs, bring all medications and home blood pressure records).
- Document test results, referral status, and preventive services delivered during each visit.
- Prepare reports on predefined indicators and follow up as required.

The ability to track patient adherence and results is essential to regularly monitor progress toward your practice's performance goals.¹⁰

Pilot the intervention with a few patients before implementing a practice-wide change. Document and discuss with your staff what went well, what didn't, and how to improve the process before you expand to include more patients (**Resources—Institute for Healthcare Improvement**).

SUMMARY

Providers cannot address all preventive and chronic care needs in the current model of care. Panel management can help providers improve care delivery and health outcomes. Electronic health records and systematic patient outreach make panel management feasible, even in small practices. ♦

RESOURCES

Guidelines for Preventive Care and Chronic Disease Management

- Advisory Committee on Immunization Practices (ACIP): www.cdc.gov/vaccines/recs/acip/default.htm
- American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Management of Patients with Chronic Stable Angina: www.americanheart.org/downloadable/heart/3377_pktangns.pdf
- American Diabetes Association: www.diabetes.org
- National Heart, Lung, and Blood Institute. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7): www.nhlbi.nih.gov/guidelines/hypertension
- National Heart, Lung, and Blood Institute. Third Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel 3): www.nhlbi.nih.gov/guidelines/cholesterol/atp3full.pdf
- US Preventive Services Task Force: www.uspreventiveservicestaskforce.org

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City Health Information:

- Improving Medication Adherence: www.nyc.gov/html/doh/downloads/pdf/chi/chi28-suppl4.pdf
- Influenza Prevention and Control, 2010-2011: www.nyc.gov/html/doh/downloads/pdf/chi/chi29-6.pdf
- Lipid Control: Preventing Cardiovascular Events in Patients With Atherosclerotic Disease or Diabetes: www.nyc.gov/html/doh/downloads/pdf/chi/chi25-5.pdf
- Management of Hypertension in Adults: www.nyc.gov/html/doh/downloads/pdf/chi/chi24-7.pdf
- Managing Asthma: www.nyc.gov/html/doh/downloads/pdf/chi/chi27-10.pdf

- Preventing Colorectal Cancer: www.nyc.gov/html/doh/downloads/pdf/chi/chi28-suppl2.pdf
- Prevention and Control of Type 2 Diabetes in Adults: www.nyc.gov/html/doh/downloads/pdf/chi/chi29-3.pdf
- New York City Regional Extension Center: www.nycreach.org
- Primary Care Information Project: www.nyc.gov/html/doh/html/pcip/pcip.shtml

Other Resources

- Institute for Healthcare Improvement: www.ihf.org
- National Committee for Quality Assurance: www.ncqa.org

Obtain the latest influenza information and recommendations on the NYC Health Department's Web site at www.nyc.gov/flu.

HELP YOUR PATIENTS QUIT SMOKING

The New York State Medicaid Benefit covers:

- 180 days of quit-smoking medications per year, and
- Up to 6 counseling sessions in a 12-month period.

To learn more about prescribing these medications, visit www.nyc.gov, keyword: clinicians.

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