

Creating Registry for Patients with Hypertension: Embarking on a Quality Improvement Methodology to Improve Care for Patients with Hypertension – Work In Process

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BACKGROUND

The role of hypertension in the increase risk of cardiovascular disease process has been well documented in the literature (Levy et. al. 1996).

Disease registries can provide an affordable and practical way for physicians to improve the management of their patients with chronic medical conditions such as Hypertension (Bruke et.al. 2010).

Quality improvement depends on accurate data to indicate the presence of conditions, accurately identify the patient population, establish care plan and best practices.

Therefore, it is crucial to ensure data in Electronic Medical Records (EMR) are standardized and the coding for hypertension is consistent.

MISSION

The aim is to create a registry of patients with hypertension by standardizing EMR data entry using diagnostic ICD9 coding (HTN 401) in Don Mills Family Health Team as a **pilot project**.

OUTCOME EXPECTATIONS

➤ Increase the rate of standardized data entry for patients with hypertension using diagnostics ICD9 coding:

❖ Create a Hypertension Patient Registry which will:

1. Improve rate of follow up in patients with hypertension **by 100 %**
2. Improve blood pressure control in patients with hypertension **by 90 % Over 12 months**.

SETTINGS & PARTICIPANTS

Start Date: April 2014

Where: Don Mills Family Health Team, Toronto, ON M3C 1J4

Who: 2 Family Physicians from Don Mills Family Health Team

Demographic: Hypertensive Patient Database

Tools: EMR - Bell X-WAVE

METHOD

Developed SQL queries and generated two separated patient lists (general list of patients within the practice and patients with hypertension) for two individual physicians using the Bell X-Wave EMR system Ad Hoc reporting option (SQL queries).

1. EMR Ad Hoc reports for physician #1

- Total patient population (n=400)
- April: confirmed case of HTN (n= 66)

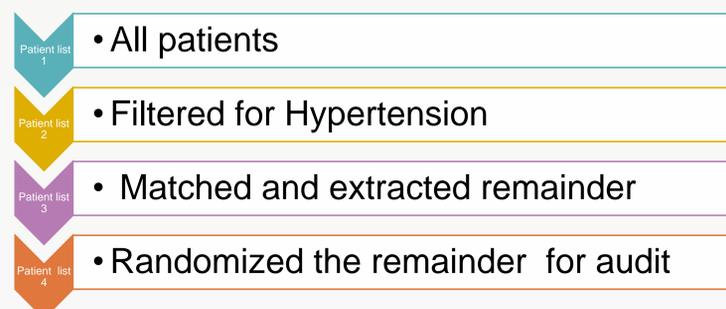
2. EMR Ad Hoc reports for physician #2

- Total patient population (n=1885)
- April: confirmed case of HTN (n=182)

Extracted patient lists in Excel files.

1. Matched two lists: general patient and HTN List.
2. Removed the identified HTN cases out of the entire general patient list.
3. Remainder list of patients was randomized for chart audit.
4. The patient lists were randomized and then given to a Chart Auditor for examination of the charts.

PROCESSES



RESULTS

A. Auditing System

A sample of 20% of charts were randomly selected to be audited for Physician #1, who had large number of patients; and for Physician #2 who had smaller number of patients in her practice, the entire patients charts were audited.

Areas explored for tracks of hypertension and/or high blood pressure:

- **Problem List - ICD9 HTN 401**
- **Document – Free Text**
- **Medication**
- **Flow Sheet**

After each audit, if the Auditor found tracks of HTN in the charts but no ICD9 code in the Problem List, the chart was flagged and sent to the physician.

B. Physician Verification

The Quality Improvement Specialist and the Chart Auditor met separately with each physician. Individual physician verified the potential missed cases. A new list was returned to the Chart Auditor with HTN condition confirmed by physician, ICD code 401 was then added to the patient's chart

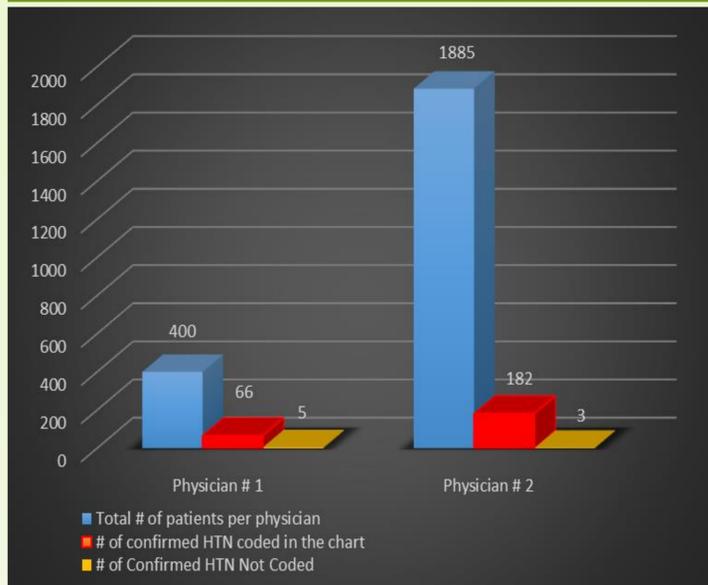
Physician #1:

- 18% of patients had confirmed hypertension
- 93% confirmed with ICD9 code (HTN 401) present in the CPP
- 7% not coded in CPP

Physician #2:

- 10% of patients had confirmed hypertension
- 98% of confirmed with ICD9 code (HTN 401) present in the CPP
- 3% were not coded in CPP

HYPERTENSIVE PATIENTS PER PHYSICIAN



NEXT STEPS

- ❖ **To improve rate of follow up:**
 - ✓ Generate report to identify HTN patients.
 - ✓ Install reminder in charts.
 - ✓ Send invite to patients to see their family physician
- ❖ **Identify strategies that would improve blood pressure control:**
 - ✓ Develop targeted educational group programs.
 - ✓ Cultivate self-management tools.
 - ✓ Collaborative IHP programs.

REFERENCES

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- 4- Shiloach M, Frencher SK, Jr, Steeger JE, Rowell KS, Bartzokis K, Tomeh MG, Richards KE, Ko CY, Hall BL (2010): Toward robust information: Data quality and inter-rater reliability in the American College of Surgeons National Surgical Quality Improvement Program. *J Am Coll Surg*: 210:6 –16

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