Measuring EMR adoption amongst Family Physicians in Ontario
Does this get better over time?

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Electronic Medical Record Administrative data Linked Database (*EMRALD*)

Background

- Simple EMR adoption is insufficient to improve quality of patient care
- Some evidence EMRs decrease health services utilization primarily with laboratory and radiology testing
- Advanced features of the EMR have been shown to be effective in improving patient care but cannot be used without a high level of data completeness.

Objectives

- To assess the impact of physician and patient time on EMR on completeness of EMR fields as a proxy measure for optimal usage

Methods

Electronic Medical Record Administrative data Linked Database (EMRALD)

ICES Institute for Clinical Evaluative Sciences

- Administrative data holdings for the province of Ontario
- 'Prescribed entity' under PHIPA

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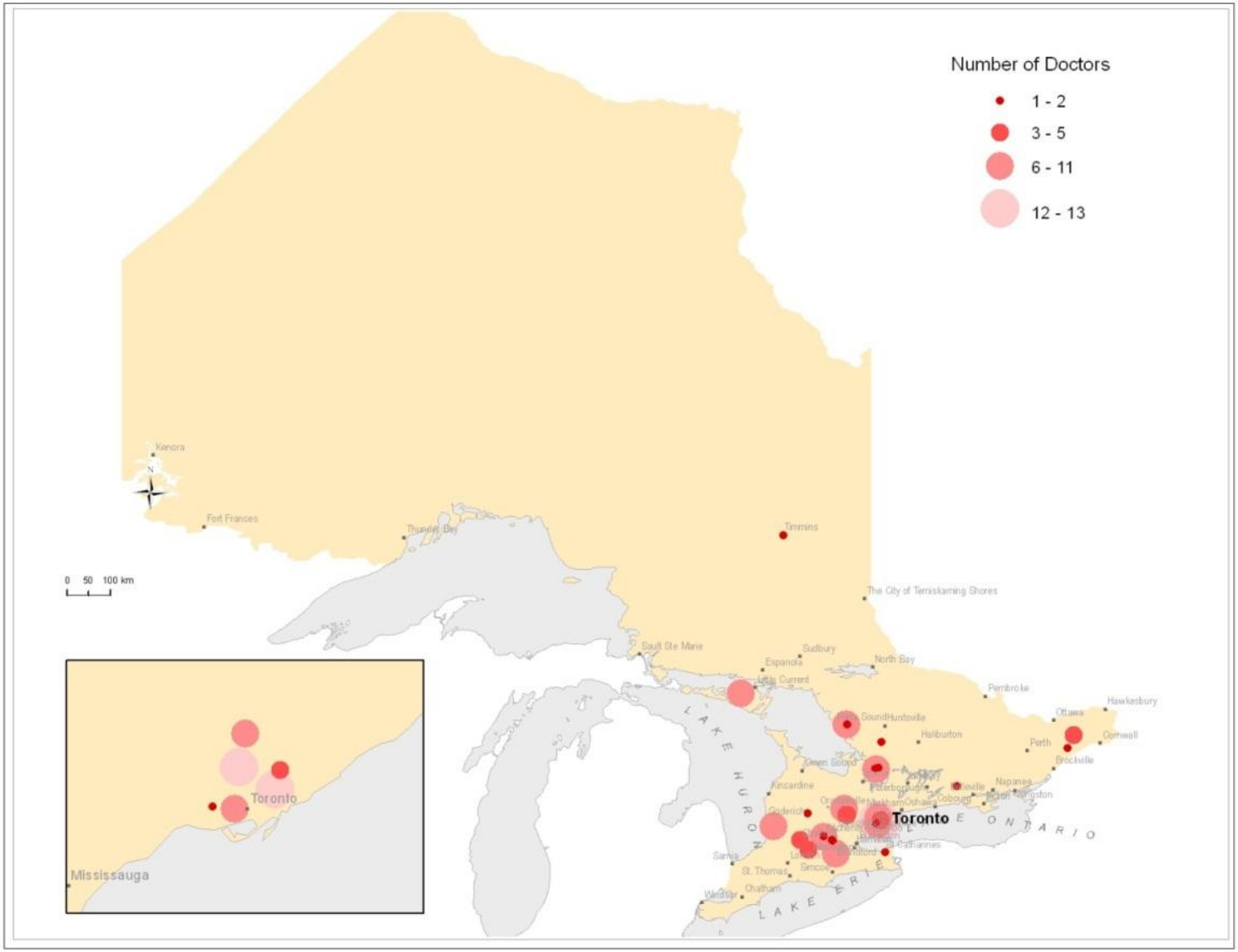
Electronic Medical Record Administrative data Linked Database (EMRALD)

Ontario distribution of EMRALD sites



Methods

- Looked at completeness of EMR fields in terms of:
  - Physician time on the EMR=duration between the date of the last extraction and the initial day with at least five patient visits on the same day
    - Grouped physicians by duration on EMR and looked in the year prior to the date of the last extraction
    - Looked at initial year and subsequent years
  - Patient time on the EMR=duration between the date of the last extraction and the initial day of a physician visit

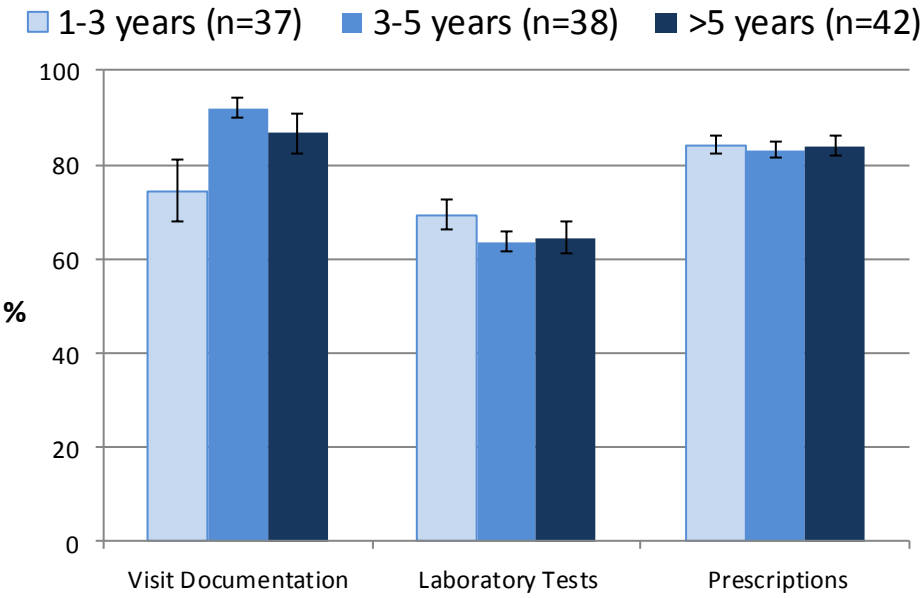
Electronic Medical Record Administrative data Linked Database (EMRALD)

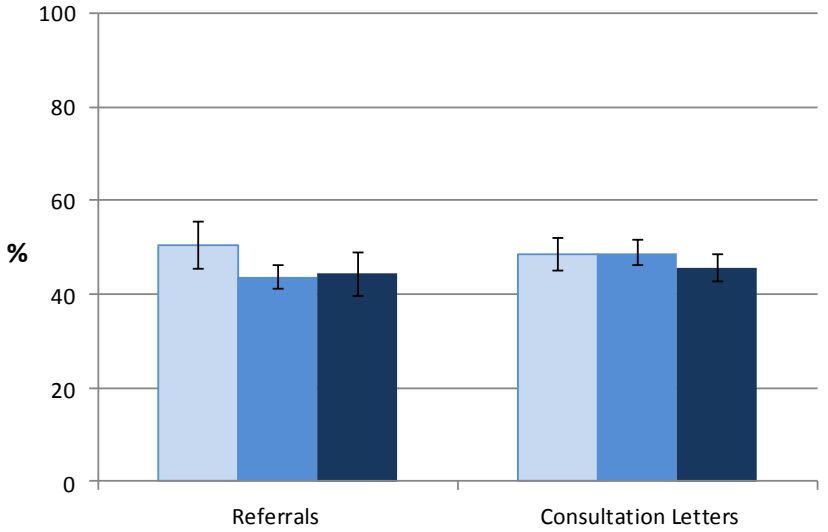
Results

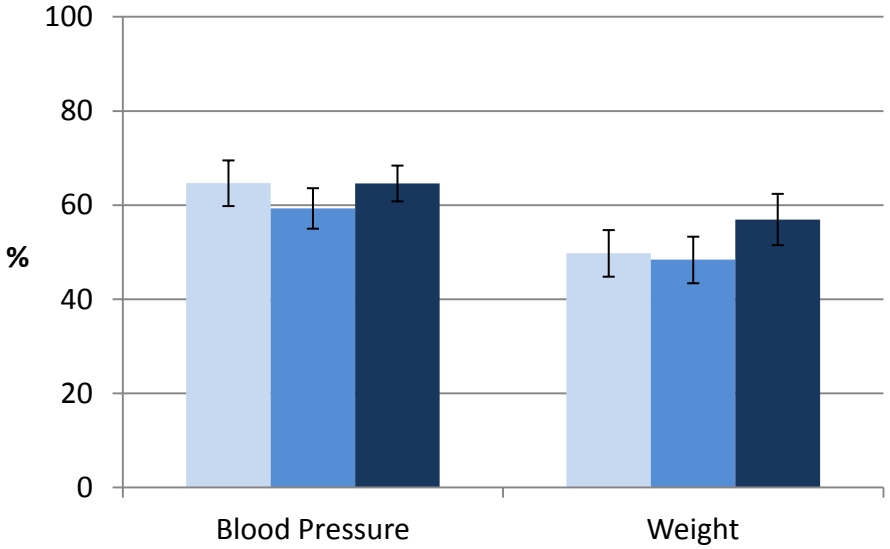
- 117 Physicians, 138672 Rostered Patients
- Time on EMR
    - Median = 5.0 years
    - Mean = 4.4 years

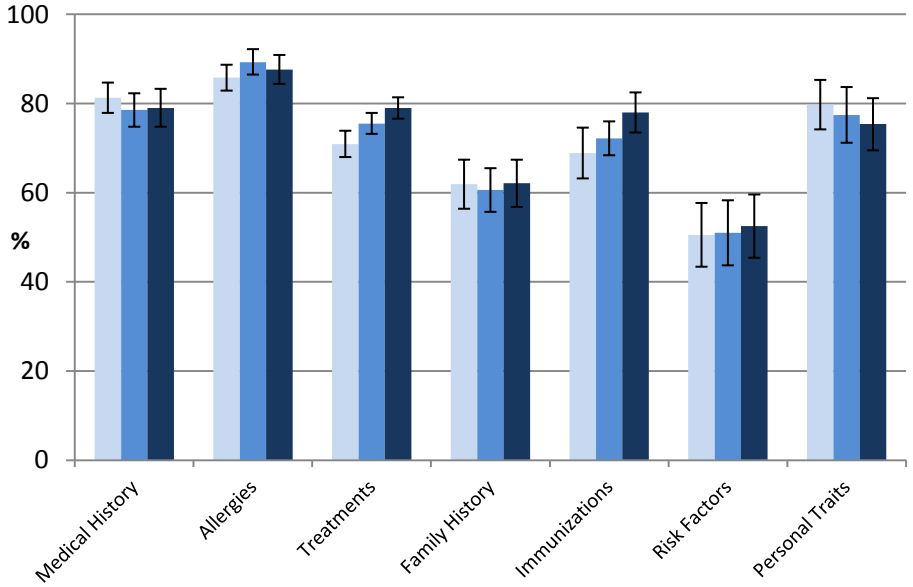
Electronic Medical Record Administrative data Linked Database (EMRALD)

Population of EMR Fields by Physician Duration of EMR Use



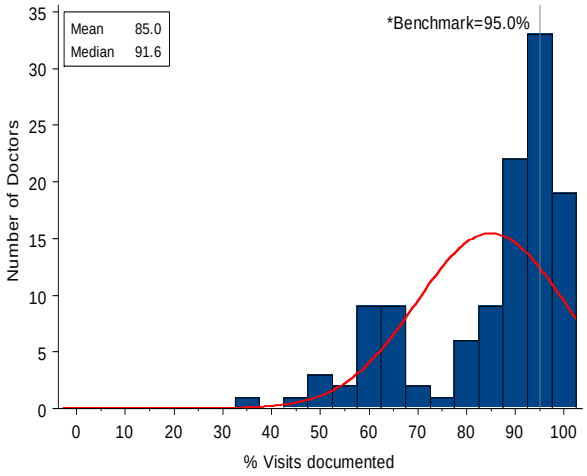


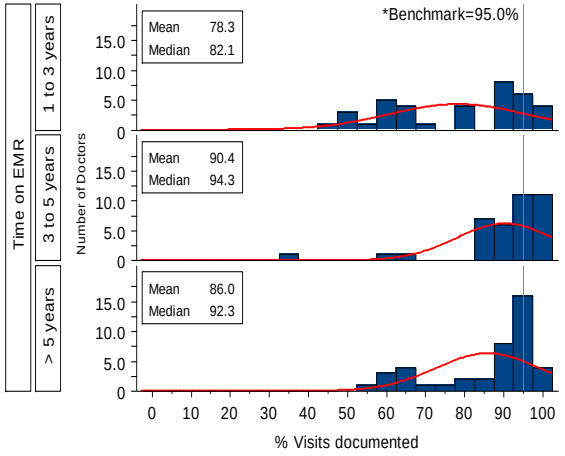




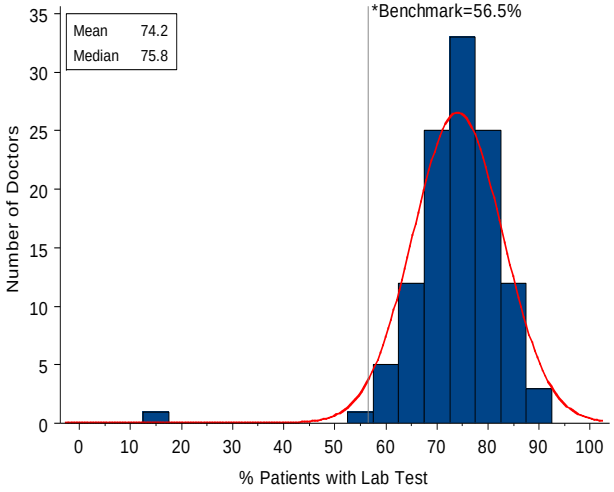
Distribution of Physicians for Utilization of the EMR for Visit Documentation, Capturing Labs, and Generating Referrals

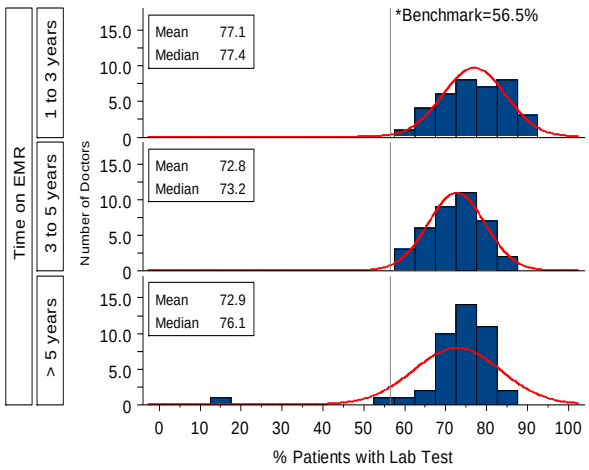
Visit Documentation



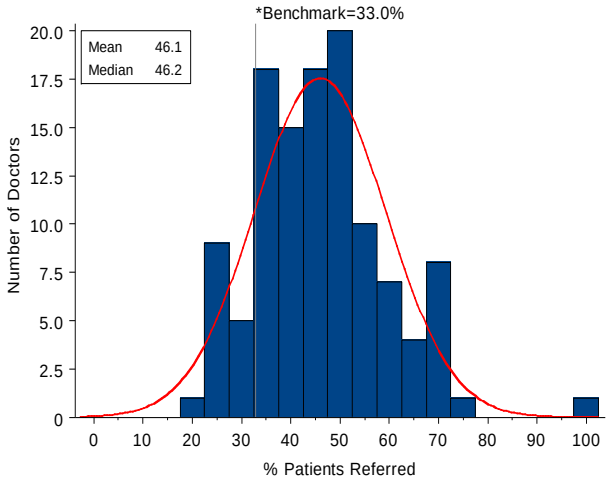


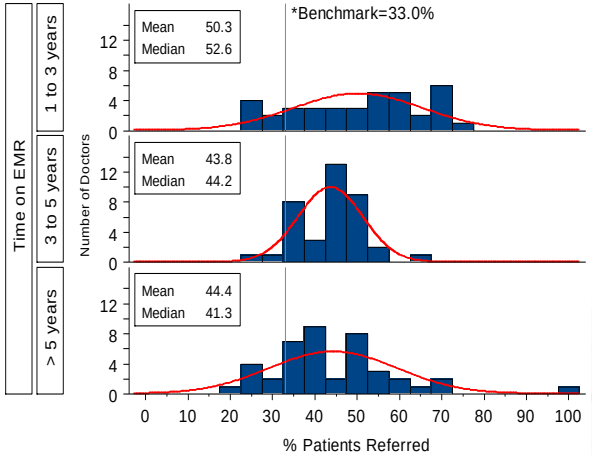
Lab Tests





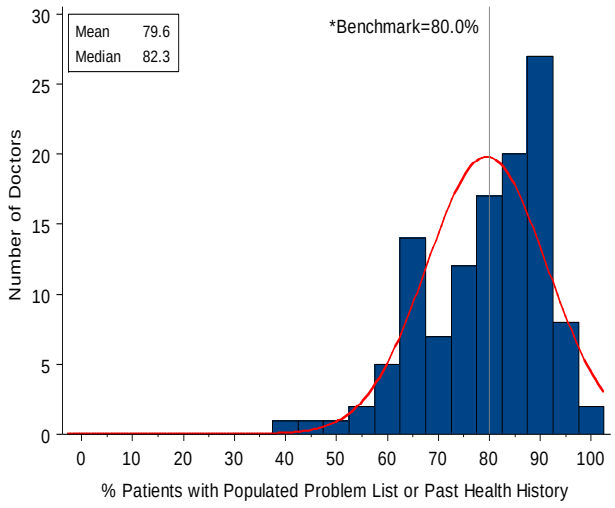
Referrals

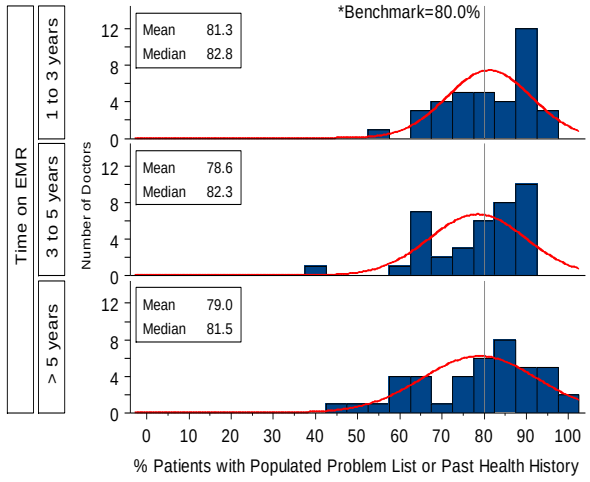




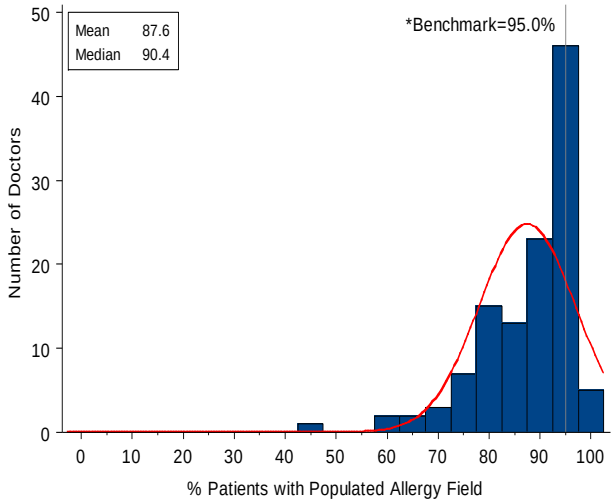
Distribution of Physicians for Population of CPP Fields

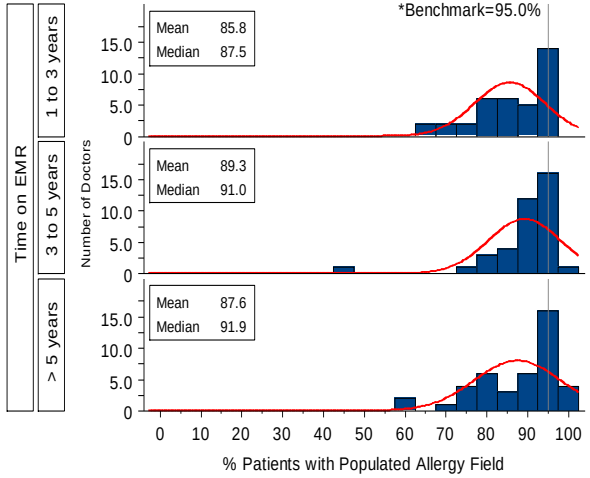
Medical History



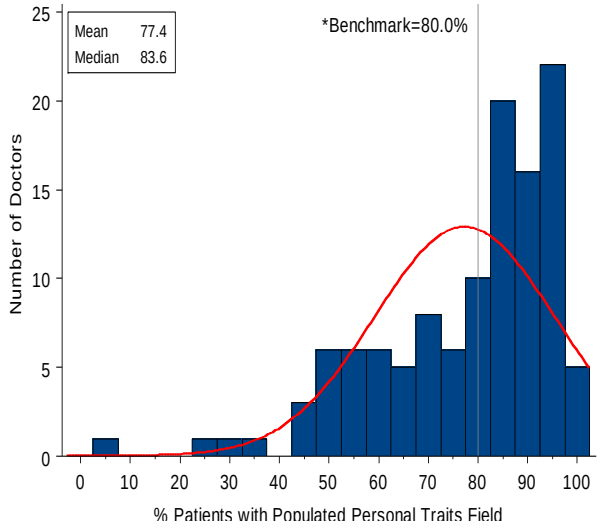


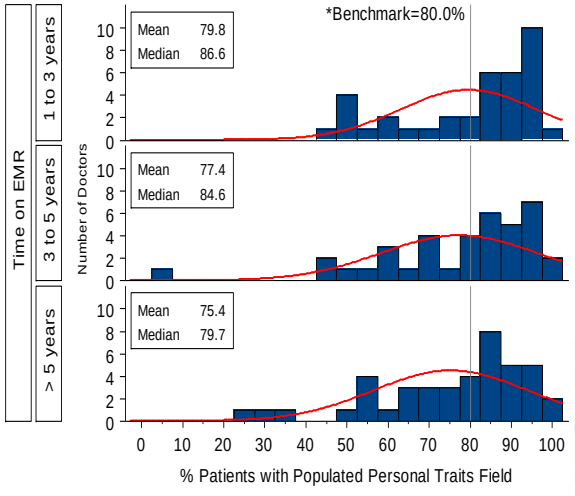
Allergies





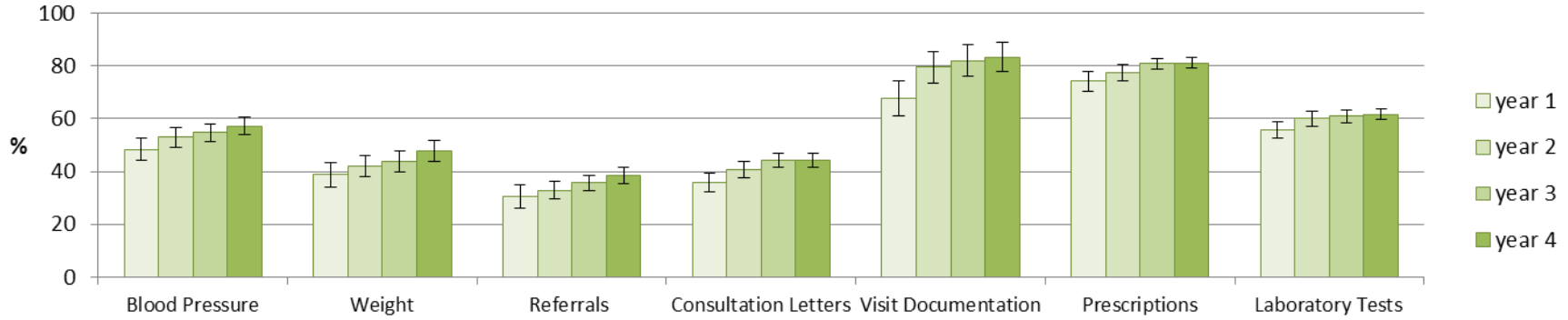
Personal Traits



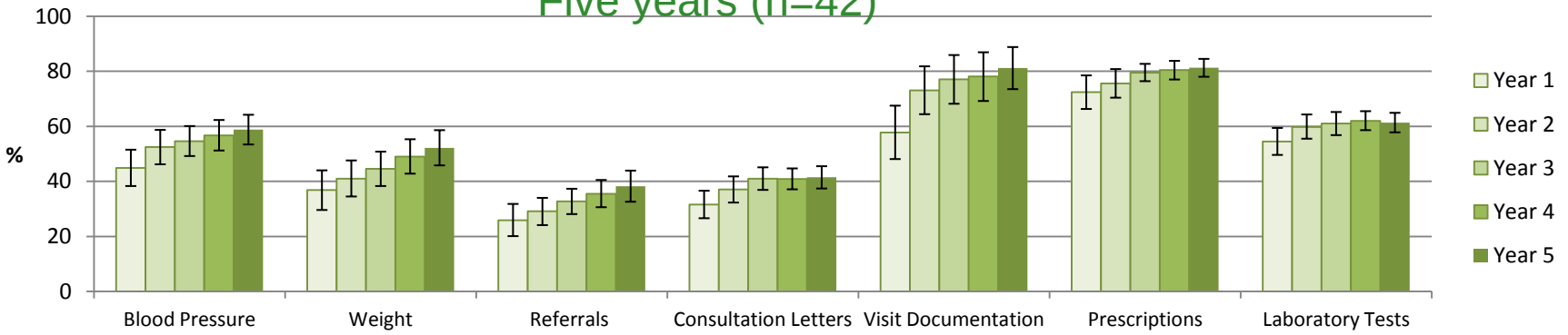


Mean utilization of the EMR per year for physicians' using the EMR for at least:

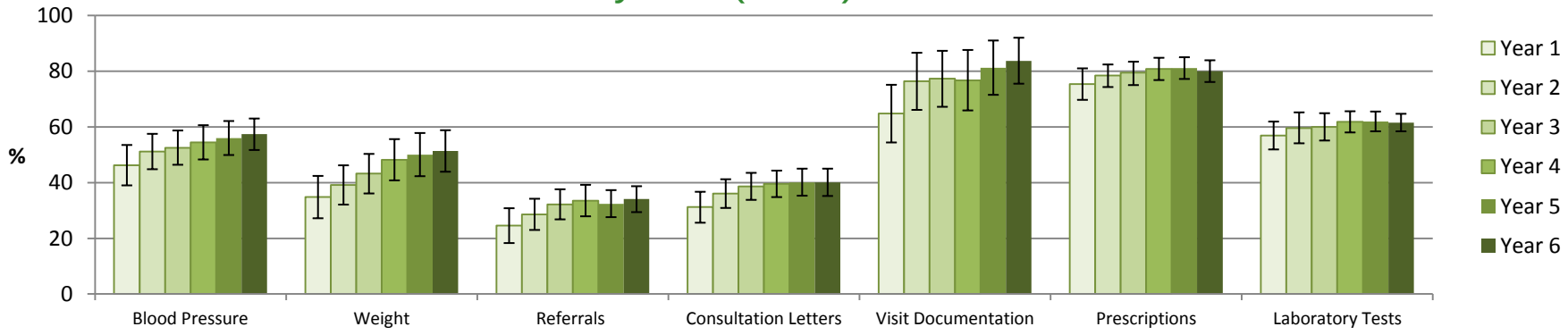
Four years (n=74)



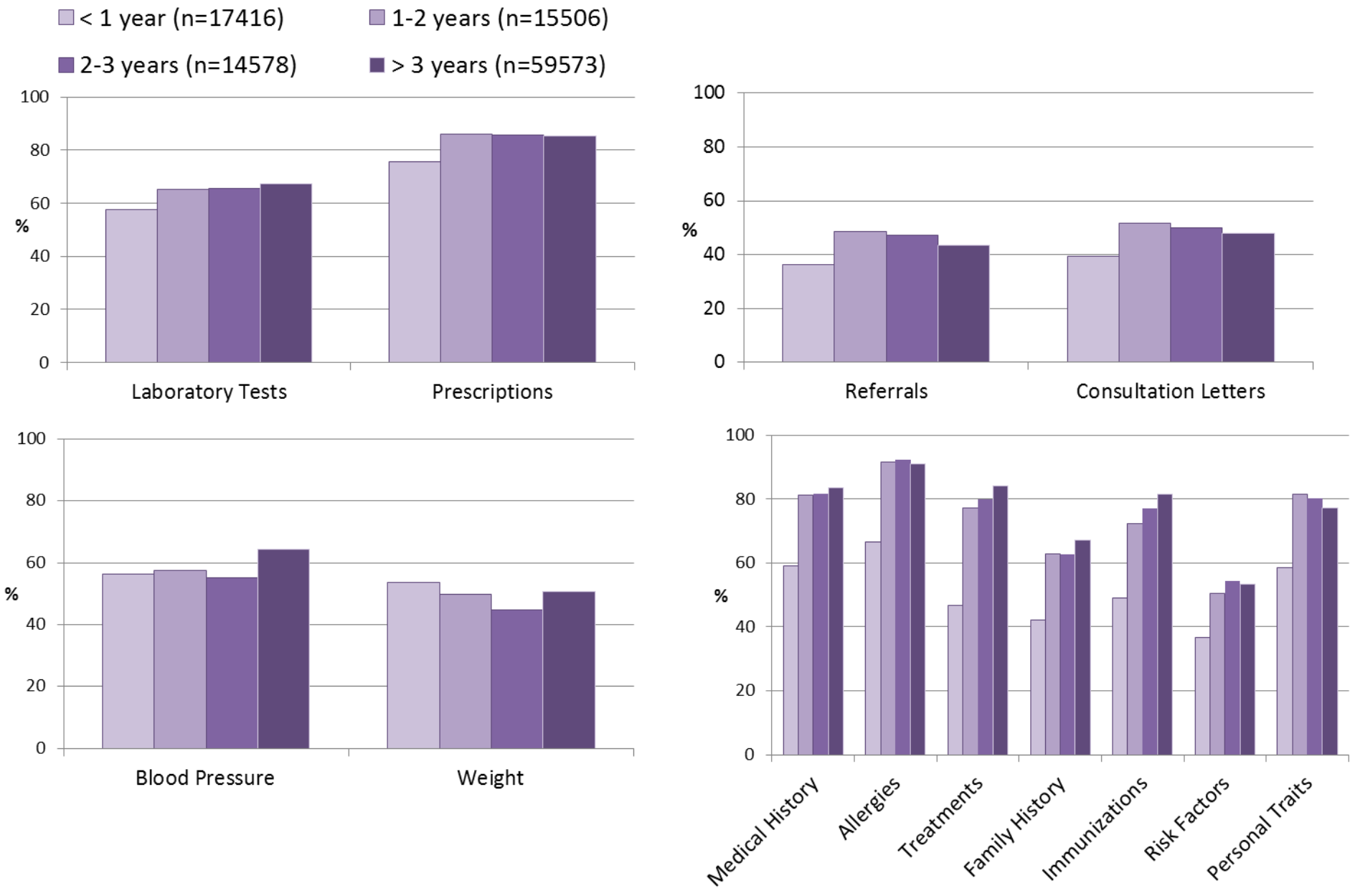
Five years (n=42)



Six years (n=32),



Population of EMR Fields by Duration of Patient Record on EMR



Limitations

- Only one proprietary system therefore generalizability uncertain
- Unable to assess use of higher level features of EMR (ie CDSS, reminders)
- Does provide baseline measures that could be used for comparison with other EMR systems

Conclusion

- The current environment of physician adoption of EMRs and programs and policies to put this into place have been successful in incorporating EMRs into clinical practice