

Reduction in Creatine Kinase Tests by Family Physicians in NL

Guideline from College of Family Physicians of Canada

Testing Creatine Kinase (CK) and ALT levels at baseline on statin initiation or for monitoring is not required.

Perform CK as clinically indicated.

Practice Points

1. CK is a useful test in patients with a high index of suspicion for muscle disease.
2. Nearly 120,000 CK tests were performed in 2015/16 in NL, a population rate of nearly 1 in 4 people.
3. In 2016/17, Quality of Care NL provided audit, feedback and academic detailing to individual Family Physicians (FPs) in Eastern Health (EH).
4. Practice Points Volume 2 contained advice on use of CK and was sent to every FP in NL in 2017.

Methods

1. Testing for CK in NL was obtained from the NL Centre for Health Information for 1 Apr 2015 – 30 Mar 2018 (three years), and analysed by region, and by FP.
2. For EH and Western Health (WH) 2015/16 data served as baseline.
3. Data from Central Health (CH) for 2015/16 was problematic and data from 2016/17 was used as baseline in this region.

Results

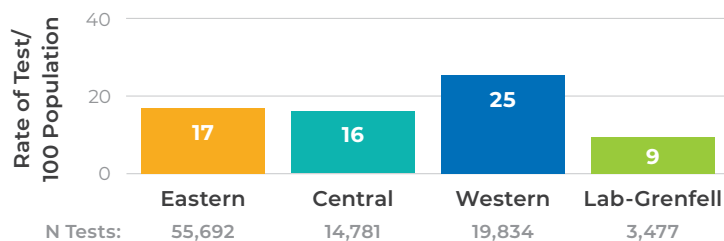


Fig. 1. Rate of CK Testing/100 Population by Region in 2017/18

- Rate of CK testing is highest in WH at 25/100 population.

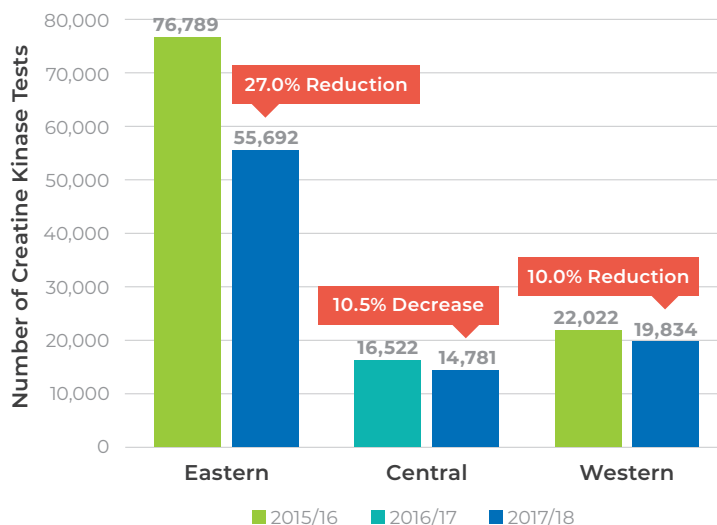


Fig. 2. Reductions in Number of CK Tests by Region

- Compared to baseline, CK testing was reduced in EH by 27%, by 10.5% in CH, and by 10% in WH.

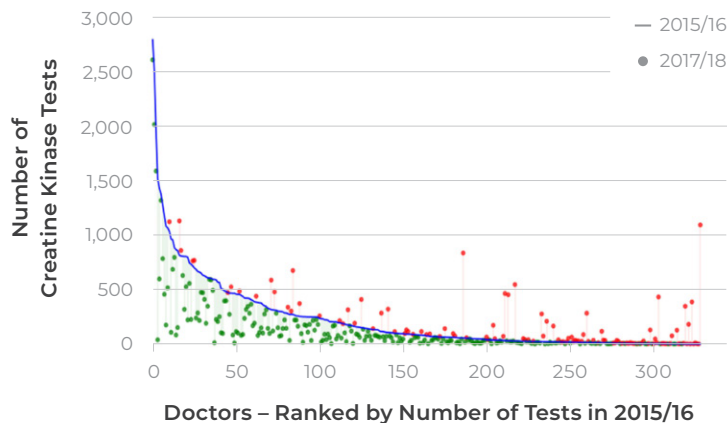


Fig. 3. Change in the Number of CK Tests at EH by FPs Comparing 2017/18 to 2015/16

Note: On the x-axis doctors are ranked by volume of tests in 2015/16 (solid line) and each individual FP's 2017/18 data is provided as a dot (linked by a vertical line to 2015/16 usage), with a reduction revealed by the dot being below the solid line and an increase by the dot being above the line.

- Of 329 FPs in EH, 65% had a reduction in testing in 2017/18 compared to 2015/16.
- A small number of very high users had little change in the volume of testing.

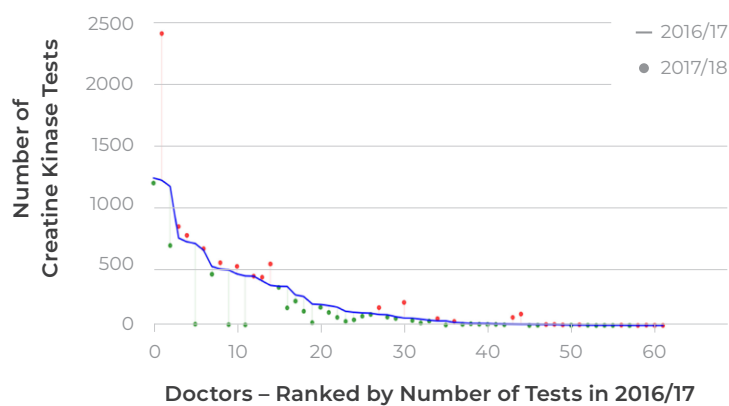


Fig. 4. Change in the Number of CK Tests at CH by FPs Comparing 2017/8 to 2016/7

See note of Fig. 3 for interpretation.

- Of 62 FPs in CH, 52% had a reduction in CK testing, mostly of small extent.
- In 2017/18 two FPs ordered >1,000 CK tests.

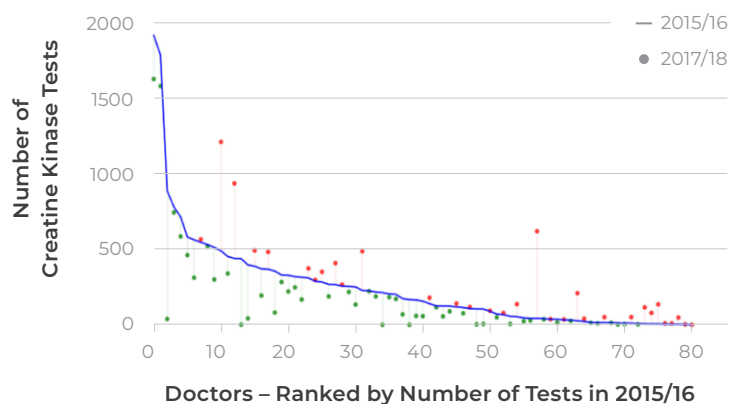


Fig. 5. Change in the Number of CK Tests at WH by FPs Comparing 2017/18 to 2015/16

See note of Fig. 3 for interpretation.

- Of 81 FPs at WH, 60% had a reduction in CK tests.
- Three FPs ordered >1,000 CK tests in 2017/18.

Conclusions

1. Rate of CK testing/100 population is highest in WH.
2. A small number of FPs ordered >1,000 CK tests annually.
3. In EH, audit, feedback and academic detailing was associated with 27% reduction in CK testing by FPs, compared to 10% in CH and WH.
4. Consideration should be given to taking CK from the requisition form and doing the test for a written order on the form.