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Data Article

Vitamin B12 test volume data before and after the implementation of an educational province-wide intervention to reduce redundant testing in Alberta



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ABSTRACT

The data presented in this article is the provincial vitamin B12 test volume data for Alberta, Canada per month between April 1, 2015 and April 30, 2018. This data set was collected from the three different Alberta Public Laboratories Laboratory Information Systems: Cerner Millennium for Calgary, Sunquest for Edmonton, and MediTech for the remaining rural zones of Alberta (Bonnyville, Grand Prairie, Camrose, Red Deer, and Medicine Hat). An educational province-wide intervention aimed at reducing redundant testing was implemented on April 11, 2017 in Calgary, Alberta and Edmonton, Alberta and on May 2, 2017 in rural Alberta sites. All vitamin B12 test results in Alberta were appended with the educational comment "A normal test result indicates adequate stores and should not be repeated. However, if specific clinical situations require re-testing, the interval should not be sooner than 1 year." Provincial monthly test volumes prior to this intervention ranged from 54,182 to 73,522 tests per month and after this intervention ranged from 59,116 to 74,006 tests per month. The total number of vitamin B12 tests ordered over the 37 months

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in Alberta was 2,444,724; 690,448 tests were ordered in Calgary, 1,029,315 tests were ordered in Edmonton, and 724,961 tests were ordered in rural sites. This data article was submitted as a companion paper to the related research article, "Implementation of an educational province-wide intervention to reduce redundant vitamin B12 testing: a cross-sectional study"[1].

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Specifications Table

Subject	Medicine and Dentistry
Specific subject area	Laboratory Medicine
Type of data	Table
How data were acquired	Alberta Public Laboratories Laboratory Information System
Data format	Raw, analyzed
Parameters for data collection	All vitamin B12 test counts were collected from the three Alberta Public Laboratories Laboratory Information Systems (Cerner Millennium for Calgary, Sunquest for Edmonton, and MediTech for the remaining zones of Alberta) each month between April 1, 2015 and April 30, 2018. An educational province-wide intervention aimed at reducing redundant testing was implemented on April 11, 2017 in Calgary, Alberta and Edmonton, Alberta and on May 2, 2017 in rural Alberta sites. All vitamin B12 test results in Alberta were appended with the educational comment "A normal test result indicates adequate stores and should not be repeated. However, if specific clinical situations require re-testing, the interval should not be sooner than 1 year."
Description of data collection	Retrieved from the three different Alberta Public Laboratories Laboratory Information Systems
Data source location	Alberta, Canada
Data accessibility	With the article
Related research article	P. Gill, M. Guo, C. K. Lau, and C. Naugler. Implementation of an educational province-wide intervention to reduce redundant vitamin B12 testing: a cross-sectional study. <i>Clinical Biochemistry</i> [submitted for publication].

Value of the Data

- The table of monthly vitamin B12 test volume data ordered in Alberta over a 37-month span can serve as a reference for other Canadian jurisdictions when performing quality assessments in their clinical laboratories
- Data can be used by clinical laboratories to determine appropriate vitamin B12 test ordering practices by Canadian physicians
- This table can be used in collaboration by clinical laboratories to assess and compare the effectiveness of various interventions to reduce vitamin B12 redundant testing in Canada
- This table can be used to assess and compare vitamin B12 test ordering practices by physicians in major cities in Alberta (Calgary and Edmonton) and rural Alberta sites

1. Data

The data included in this article demonstrates monthly provincial vitamin B12 test volume data for Alberta, Canada between April 1, 2015 and April 30, 2018. This data set was collected from the three different Alberta Public Laboratories Laboratory Information Systems: Cerner Millennium for Calgary, Sunquest for Edmonton, and MediTech for the remaining zones of Alberta (Bonnyville, Grand Prairie, Camrose, Red Deer, and Medicine Hat). Monthly provincial test volumes prior to this intervention ranged from 54,182 to 73,522 tests per month and after this intervention ranged from 59,116 to 74,006 tests per month. The total number of vitamin B12 tests ordered over the 37 months in Alberta was

2,444,724; 690,448 tests were ordered in Calgary, 1,029,315 tests were ordered in Edmonton, and 724,961 tests were ordered in rural sites. See [Table 1](#) for a complete list of monthly vitamin B12 test volumes in Alberta.

2. Experimental design, materials, and methods

Laboratory test volumes are publicly available data that are reported regularly to Alberta Health Services, the organizational body that oversees Alberta Public Laboratories. This data set was collected from the three different Alberta Public Laboratories Laboratory Information Systems: Cerner Millennium for Calgary, Sunquest for Edmonton, and MediTech for the remaining zones of Alberta (Bonnyville, Grand Prairie, Camrose, Red Deer, and Medicine Hat). The study consisted of all vitamin B12 tests ordered between April 1, 2015 and April 30, 2018 in Alberta. The monthly test volumes were recorded for each of these sites and total monthly provincial test volumes were also determined ([Table 1](#)). This table was then used to assess the effectiveness of an educational province-wide intervention aimed at reducing redundant vitamin B12 testing in Alberta [1].

Table 1

Monthly vitamin B12 test volumes for Alberta, Canada between April 1, 2015 and April 30, 2018 by site (Calgary, Edmonton, and rural zones) and provincial total.

Month and Year	Site			Provincial Total
	Calgary	Edmonton	Rural Zones	
April 2015	17,751	25,893	21,775	65,419
May 2015	17,434	28,470	21,666	67,570
June 2015	18,248	28,281	22,432	68,961
July 2015	17,435	25,112	18,936	61,483
August 2015	16,110	26,358	18,750	61,218
September 2015	17,267	26,618	21,236	65,121
October 2015	18,548	28,492	21,844	68,884
November 2015	17,677	27,429	20,439	65,545
December 2015	16,838	23,624	17,626	58,088
January 2016	17,988	27,431	20,558	65,977
February 2016	18,237	28,193	21,356	67,786
March 2016	20,034	29,368	22,682	72,084
April 2016	19,933	30,616	22,973	73,522
May 2016	19,944	30,374	20,457	70,775
June 2016	20,417	27,734	19,459	67,610
July 2016	18,103	27,650	18,105	63,858
August 2016	18,413	27,060	19,444	64,917
September 2016	18,299	26,326	20,130	64,755
October 2016	18,304	29,115	20,509	67,928
November 2016	18,609	27,226	19,650	65,485
December 2016	15,711	22,964	15,507	54,182
January 2017	17,743	26,872	18,805	63,420
February 2017	17,289	25,953	18,085	61,327
March 2017	21,557	29,549	22,341	73,447
April 2017	18,597	29,379	19,509	67,485
May 2017	20,924	30,175	20,915	72,014
June 2017	20,275	28,374	19,918	68,567
July 2017	18,215	27,590	16,805	62,610
August 2017	19,646	26,635	16,975	63,256
September 2017	19,041	27,645	17,888	64,574
October 2017	19,843	30,377	18,961	69,181
November 2017	19,434	27,136	17,729	64,299
December 2017	17,066	26,503	15,547	59,116
January 2018	19,314	28,001	18,673	65,988
February 2018	17,560	26,997	17,331	61,888
March 2018	21,349	32,556	20,101	74,006
April 2018	21,295	31,239	19,844	72,378

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Reference

- [1] P. Gill, M. Guo, C.K. Lau, C. Naugler, Implementation of an educational province-wide intervention to reduce redundant vitamin B12 testing: a cross-sectional study, *Clin. Biochem.* (2019), <https://doi.org/10.1016/j.clinbiochem.2019.10.006> [Epub ahead of print].