ELECTRONIC SUPPLEMENTARY MATERIAL

Ziafat K *et al.*: Opioid dispensing after Cesarean delivery in British Columbia: a historical cohort analysis from 2004 to 2019

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tramadol, post Cesarean delivery, showing a change after the BC government's

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emergency

eTable 1   ICD-10 classification codes for Cesarean delivery procedures

Classification code type	Detailed list
ICD-10 Cesarean section procedure classifiers	Classical section (vertical incision in upper segment): 5.MD.60.JZ, 5.MD.60.KA, 5.MD.60.JY, 5.MD.60.CC
	Extraperitoneal section: 5.MD.60.KC, 5.MD.60.KD, 5.MD.60.KB, 5.MD.60.CD
	Inverted T incision: 5.MD.60.RA, 5.MD.60.RB, 5.MD.60.KG, 5.MD.60.CE
	Laparotomy (for abdominal pregnancy): 5.MD.60.RE, 5.MD.60.RF, 5.MD.60.KF
	Lower segment transverse incision: 5.MD.60.JW, 5.MD.60.JX, 5.MD.60.AA, 5.MD.60.CF
	Other type of cesarean delivery section NEC: 5.MD.60.RG, 5.MD.60.RH, 5.MD.60.KT, 5.MD.60.CG

ICD-10 = International Statistical Classification of Diseases and Related Health Problems, 10th Revision

eTable 2   List of opioid drugs used in the study

Opioid drugs	ANILERIDINE, BUTORPHANOL, CODEINE*, PROPOXYPHENE, FENTANIL, FENTANYL, HYDROCODONE, HYDROMORPHONE*, MALBUPHINE, MEPERIDINE, METHADONE, MORPHINE, NALBUPHINE, OPIUM, OXYCODONE*, PENTAZOCINE, PETHIDINE, SUBOXONE, SUFENTANIL, TAPENTADOL, TRAMADOL*

*Most commonly prescribed opioids in the cohort

eTable 3   List of cancer diagnoses as classified by ICD-9 codes

Classification code type	Detailed list
ICD-9 cancer classifiers	140,141,142,143,144,145,146,147,148,149,150,151,152,153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209

Note: more information on ICD-9 codes can be found here
ICD-9 = International Classification of Diseases, Ninth Revision

eTable 4   CIHI hospital peer group classification

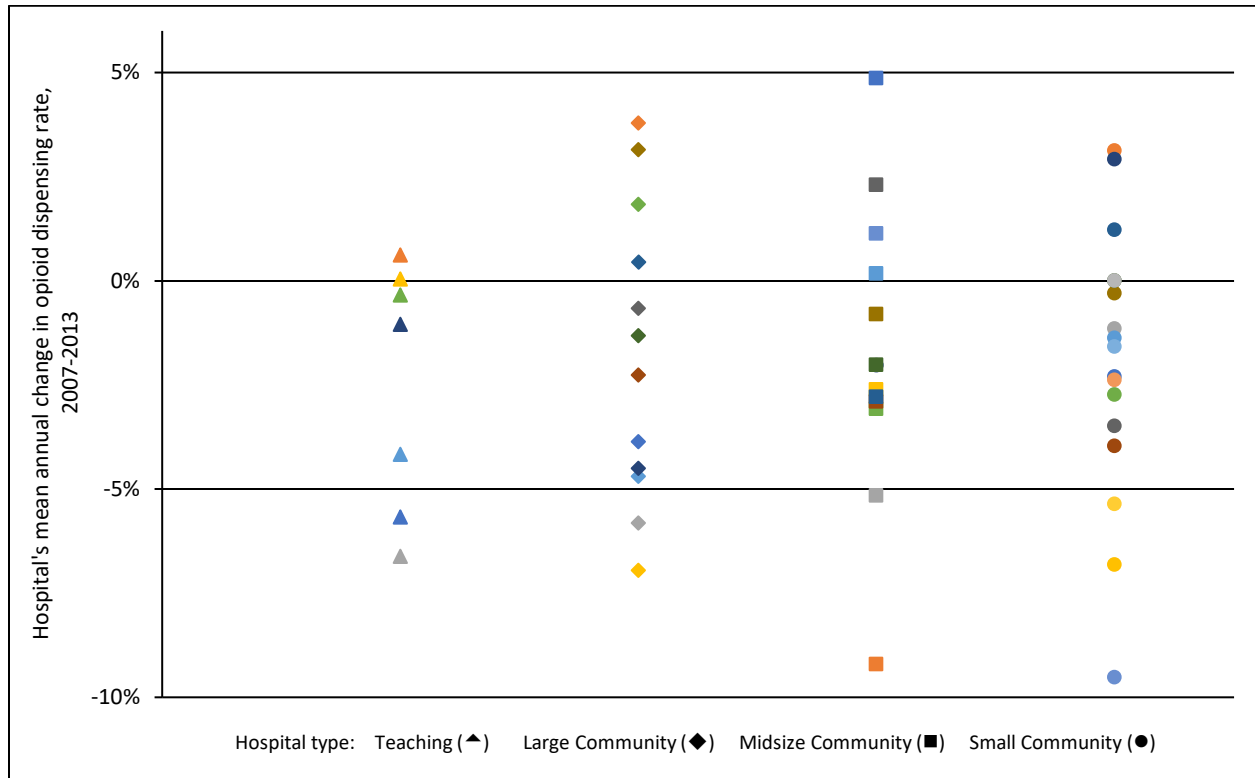| CIHI hospital peer group classification*[A,B]	Criteria
Teaching Hospitals	Hospitals that meet at least 1 of the following criteria: • Have confirmed teaching status from the provincial ministry • Identified as teaching in the provincial ministry submission to the Canadian MIS Database
Community—Large Hospitals	Hospitals that meet 2 of the following criteria: • More than 8,000 inpatient cases • More than 10,000 weighted cases • More than 50,000 inpatient days
Community—Large Hospitals	Hospitals that do not meet the above criteria and have 2,000 or more weighted cases
Community—Small Hospitals	Hospitals that do not meet the above criteria and have fewer than 2,000 weighted cases

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CIHI = Canadian Institute for Health Information; MIS = Management Information System

[A] *Canadian Institute for Health Information*. Your Health System 2021. Available from URL: http://yourhealthsystem.cihi.ca/static/assets/hsp_pro/build/download/All_Results_Export.xlsx (accessed April 2022).
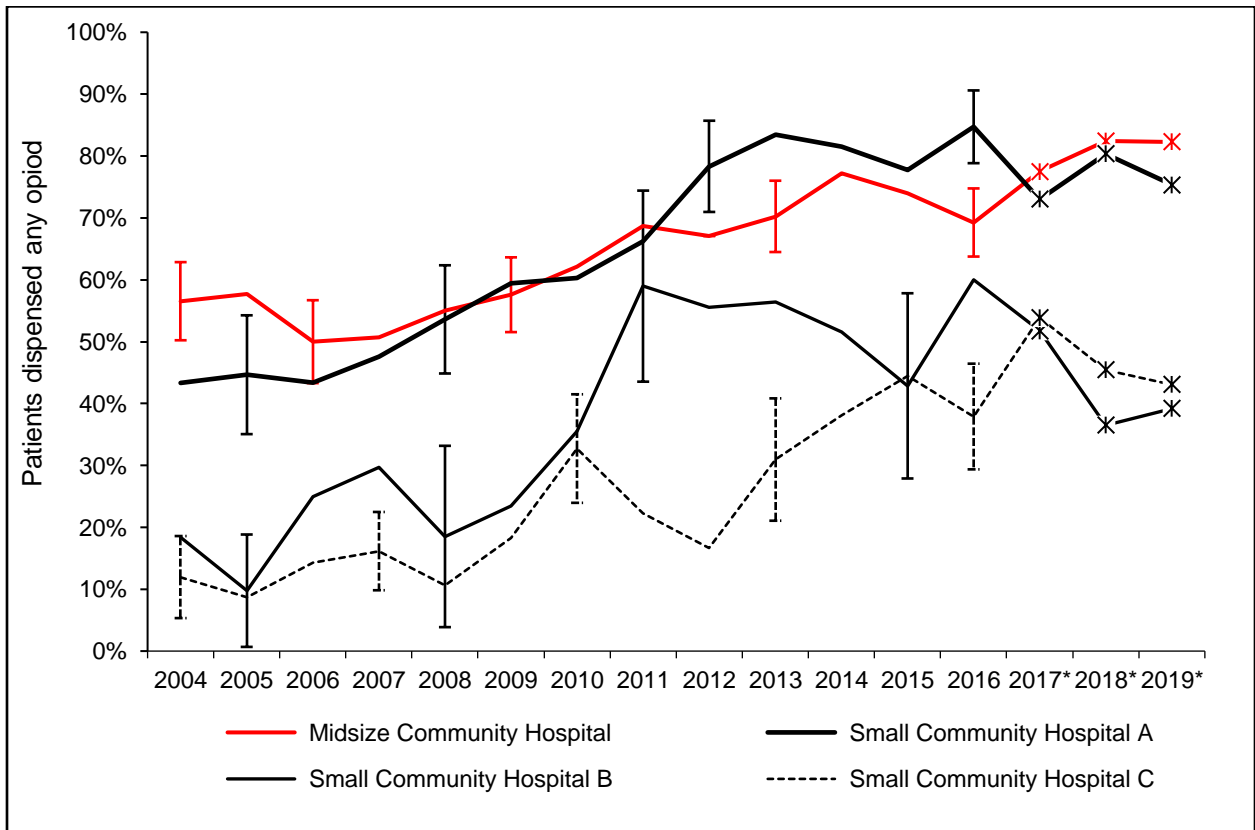
[B] *Canadian Institute for Health Information*. Indicator Library: Peer Group Methodology, November 2019. Available from URL: https://www.cihi.ca/sites/default/files/document/peer-group-methodology_en.pdf (accessed April 2022).

eFig. 1   The distribution of hospitals by their rates of change, in 2007–2013, measured by the mean annual change in percentage of patients dispensed opioids from community pharmacies within seven days after discharge post Cesarean delivery in British Columbia
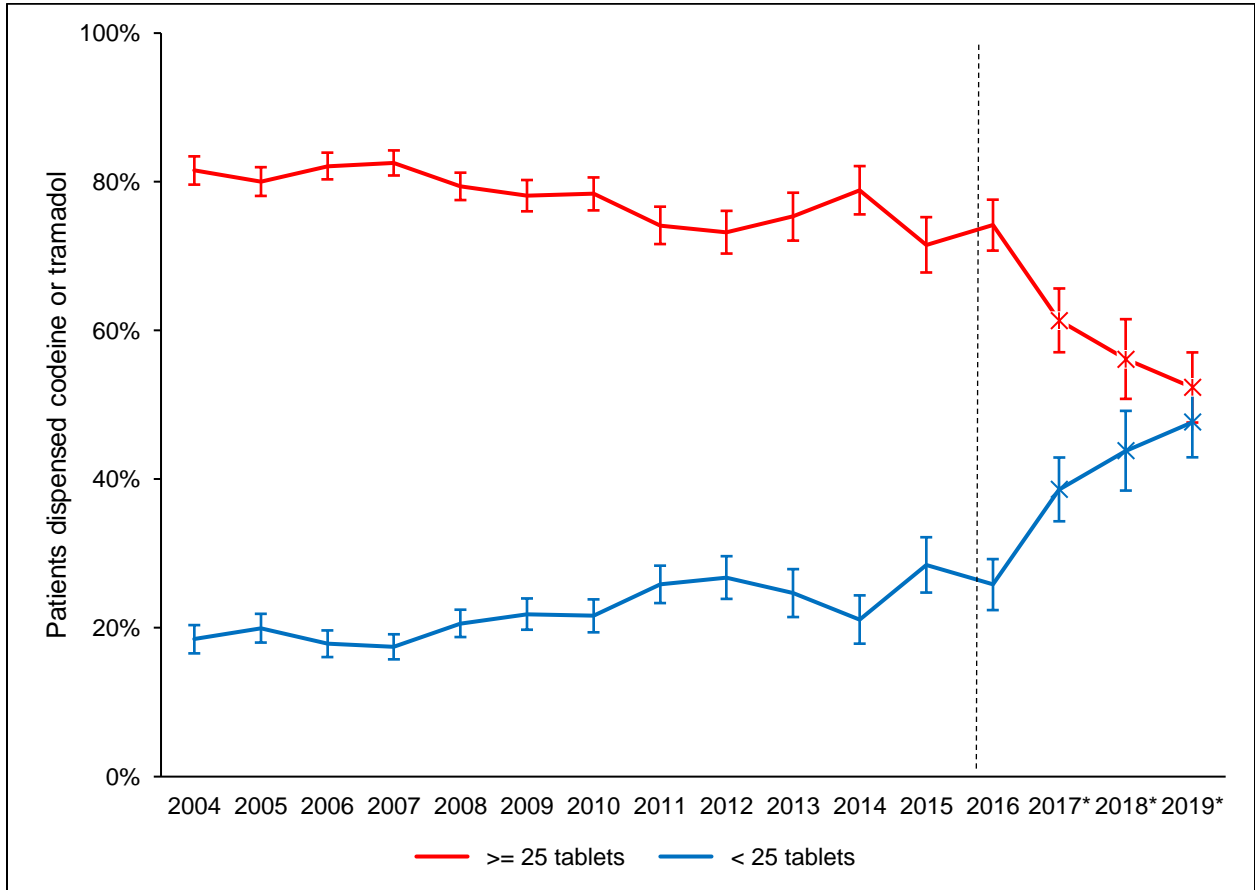

Hospital peer group types are described above in eTable 4.

eFig. 2   Mean percentage of patients dispensed opioids within seven days after discharge post Cesarean delivery in hospitals with rising rates, in contrast to declining rates elsewhere. Vertical error bars (not shown for all points to enhance visual clarity) indicate 95% confidence intervals

*Estimated rates 2017–2019, based on trends observed in the Surgical Quality Outcome Reports Extension study

eFig. 3   Mean percentage of patients dispensed < 25 or ≥ 25 tablets of codeine or tramadol, post Cesarean delivery, showing a change after the BC government's April 2016 declaration that the opioid overdose epidemic was a public health emergency

*Estimated percentages in 2017–2019 were based on trends in the Surgical Quality Outcome Reports Extension study

Hydromorphone and oxycodone tablet numbers were not included as they did not change significantly over those years. Vertical error bars indicate approximate 95% confidence intervals, widened by a Bonferroni correction to account for 5 comparisons (replacing the critical value of 1.96 with 2.56).