Essential Medicines in Canada: What is Essential?

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Disclosures

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- Associate Editor for Canadian Medical Association Journal (industry ads)
40 Years of the Model List of Essential Medicines
1977 - 2017
5.6 billion people

140 countries

318 medicines per list (range 42 to 873) (median 284)

2208 unique medicines total
International essential medicines list examples

- Sweden: Wise list
- USA: Veteran’s Administration
- United Kingdom: Local formularies (longer)
- World Health Organization: Model list of essential medicines
Number of medicines by the percentage of countries listing each

<table>
<thead>
<tr>
<th>Percentage of countries listing each medicine</th>
<th># of medicines</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10 %</td>
<td>1400</td>
</tr>
<tr>
<td>10 to 20 %</td>
<td>200</td>
</tr>
<tr>
<td>20 to 30 %</td>
<td>100</td>
</tr>
<tr>
<td>30 to 40 %</td>
<td>50</td>
</tr>
<tr>
<td>40 to 50 %</td>
<td>20</td>
</tr>
<tr>
<td>50 to 60 %</td>
<td>10</td>
</tr>
<tr>
<td>60 to 70 %</td>
<td>5</td>
</tr>
<tr>
<td>70 to 80 %</td>
<td>3</td>
</tr>
<tr>
<td>80 to 90 %</td>
<td>2</td>
</tr>
<tr>
<td>90 to 100 %</td>
<td>1</td>
</tr>
</tbody>
</table>
Number of medicines by the percentage of countries listing each

# of medicines

Percentage of countries listing each medicine

< 1 %  < 2 %  < 3 %  < 4 %  < 5 %  < 6 %  < 7 %  < 8 %  < 9 %  <10 %  <11 %  <12 %  <13 %  <14 %  <15 %  <16 %  <17 %  <18 %  <19 %  < 20 %
Number of differences from WHO model list

LEGEND:
- 0-199 Differences
- 200-399 Differences
- 400+ Differences

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CLEAN Meds list

- Purpose: identify all needed medications
- Exclude: cancer treatments, inpatient
- Established a process based on needs of people and evidence of efficacy and safety
- Not considered: cost
CLEAN Meds list development steps

1. Adaptation of the WHO model list of essential medicines
2. Added medicines based on clinical practice guidelines
3. Sought feedback from clinicians across Canada, panel of citizens
4. Reviewed national prescribing data (IMS Brogan) and considered medications not covered
5. Decisions made by panel of clinician scientists
3 Clinician-Scientist meet

Views written before meeting
At meeting, views shown, evidence reviewed
Decision voted on using GRADE
Our Revised List of Essential Medications

448

368 medications removed because:
1) Not a medication (59)
2) Routes of administration (37)
3) Same indication as listed medication (136)
4) Uncommon indication in Canadian primary care (52)
5) Not a primary care medication (84)

80

28 medications added based on clinical practice guidelines

108

Clinician scientist deliberation:
11 replacement, 33 addition, 9 removals

132
CLEAN Meds

Carefully selected and Easily Accessible at No charge Medications

Search by medication, symptom or condition

e.g., joints, ibuprofen, etc.

abacavir • acetaminophen • acetylsalicylic acid • adalimumab • alendronate • allopurinol • amiodarone • amlodipine • amoxicillin • amoxicillin/clavulanic acid • atomoxetine • atorvastatin • azathioprine • azithromycin • baclofen • beclomethasone • benzoyl peroxide • benztrapine • betamethasone • bisoprolol • budesonide • candesartan • carbamazepine • cephalaxin • cetirizine • chlorthalidone • ciprofloxacin • clindamycin • clopidogrel • clotrimazole • cloxacillin • clozapine • conjugated estrogens • dabigatran • dexamethasone • diltiazem • dolutegravir • domperidone • donepezil • doxycycline • efavirenz • eletriptan • emtricitabine • epinephrine • estradiol • ethinylestradiol/levonorgestrel • ferrous fumarate • finasteride • fluconazole • floxetine • fluticasone • folic acid • furosemide • fusidic acid • gabapentin • glipizide • haloperidol • hydrocortisone • hydroxychloroquine • ibuprofen • insulin, long acting • insulin, short acting • ipratropium • labetalol • lamivudine • latanoprost • levodopa/carbidopa • levofloxacin • levonorgestrel – releasing intrauterine system • levothyroxine • lithium • loperamide • medroxyprogesterone • metformin • methimazole • methotrexate • methylprednisolone • metoclopramide • metronidazole • mupirocin • naltrexone • naproxen • nicotine replacement therapy • nitrofurantoin • nitroglycerin • nortriptyline • nystatin • olopatadine • pantoprazole • permethrin • phenytoin • pilocarpine • polyethylene glycol 3350 • potassium • pravastatin • prednisone • propylthiouracil • ramipril • ranitidine • risperidone • rivaroxaban • salbutamol • salicylic acid • salmeterol • senna • sertraline • spironolactone • sulfamethoxazole/trimethoprim • sulfasalazine • tadalafil • tamsulosin • tenofovir disoproxil fumarate • thiamine • tiotropium • tranexamic acid • tretinoin • trimethoprim • urea • vaginal ring eluting etonogestrel and ethinyl estradiol • valacyclovir • valproic acid • varenicline • vitamin B12 • vitamin D • warfarin

cleanmeds.ca
Current CLEAN Meds list

- 132 medicines
- One or two agents from each class
- Treatments for acute conditions (e.g. pneumonia, gout)
- Treatments for chronic diseases (e.g. diabetes, HIV)
- Surprisingly on list: adalimumab, rivaroxaban, dolutegravir
- Surprisingly off list: docusate, most antidepressants
# Coverage of CLEAN Meds list

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed Medicines only</td>
<td>e.g. pantoprazole only</td>
<td>44 %</td>
</tr>
<tr>
<td>Listed Medicines + Chemical subgroup</td>
<td>omeprazole, pantoprazole, lansoprazole, rabeprazole, esomeprazole, dexamethasoprazole, dextraebaprazole</td>
<td>77 %</td>
</tr>
<tr>
<td>Listed Medicines + Pharmacological subgroup</td>
<td>H2-receptor antagonists, Prostaglandins, Proton pump inhibitors, Combinations for eradication of Helicobacter pylori, Other drugs for peptic ulcer and gastro-oesophageal reflux disease</td>
<td>90 %</td>
</tr>
</tbody>
</table>

*Data from IMS Brogan and CIHI*
Potential cost implications of publicly funding list
led by Dr. Steve Morgan

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th>Private</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+$1.2b (+11%; $0.37b to $2.0b)</td>
<td>-$4.3b (-28%; -$2.7b to -$5.8b)</td>
<td>-$3.0b (-12%; -$0.74 to -$5.5b)</td>
</tr>
</tbody>
</table>

- utilization +10% (+4 to 13%)
- medicine prices -28% (-23 to -32%) based on USA (-47%), Sweden (-60%) & New Zealand (-84%)
- existing public plans cover *all* medicines (not just listed medicines)
- excludes government savings related to private insurance and any savings from improved health or decreased service utilization
Limitations and challenges

- Most approved products *not* listed
- Brevity surprising to clinicians
- Acceptability to patients not determined
- Projected coverage and costs based on assumptions that can be tested
- Developed by researchers – **Who will administer the list?**
Strengths

- Exists
- Short
- Evidence-based (mostly)
- Based on feedback from clinicians and pan-Canadian prescribing patterns
- Being rigorously evaluated in a randomized controlled trial
CLEAN Meds RCT

**Population**  
Adult primary care patients who report cost-related non-adherence to medications.

**Intervention**  
*Free* and *convenient access* to a carefully selected set of essential medications with otherwise usual care (n = 392)

**Control**  
Usual access to medications and *usual care* (n = 392)

**Outcome**  
Primary outcome  
- Appropriate adherence to medications over 12 months

Secondary outcomes  
- HbA1c levels  
- Blood pressure  
- Cholesterol  
- Total direct healthcare costs including medications  
- Patient oriented outcomes
1. Should Canada have an essential medicines list?

2. What’s the purpose of a Canadian essential medicines list?

3. Why don’t we already have an essential medicines list?