

H1N1 Influenza Prescription Information

Some observations from California and the nation

The IMS Health – CDC National Influenza Surveillance Project

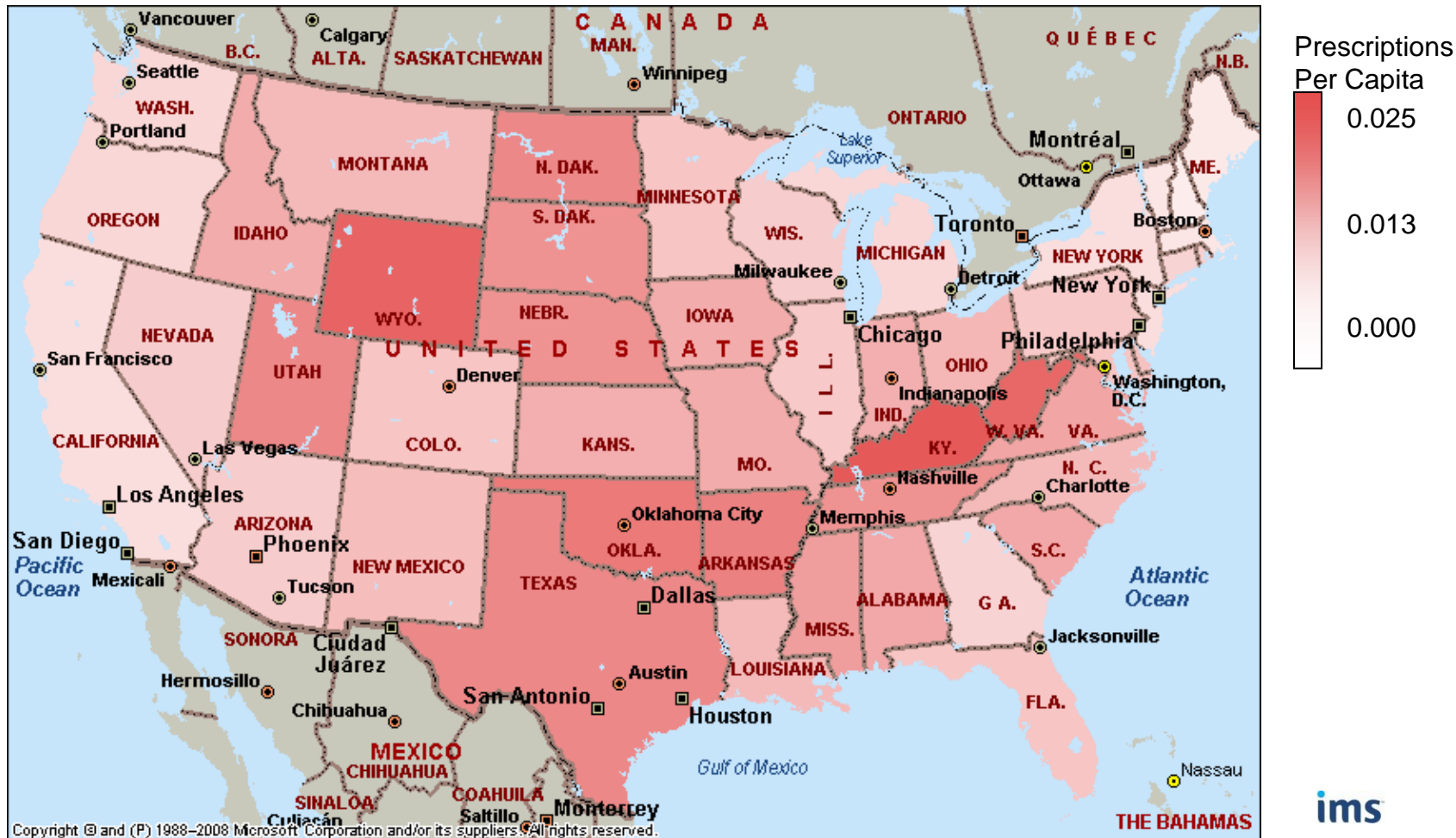
During the autumn of 2009, IMS Health launched a program of information provision to the U.S. Centers for Disease Control and Prevention. This ongoing project's aims are to complement and enhance CDC's existing means of disease surveillance, to create an additional early warning system, and to provide the agency's doctors and epidemiologists with the best tools possible for pandemic tracking and planning.

Weekly reports based on IMS Health's data allow CDC doctors to track the dispensing of prescriptions for antiviral drugs with unparalleled speed and geographic precision, and to make comparisons with historic trends. Analysis of this information allows scientists and public health authorities to respond more quickly in specific areas of the country where new outbreaks of influenza might be emerging.

Influenza Antiviral Prescriptions Per Capita

USA by State

October 2009



*Flumadine (rimantadine HCL), Relenza (zanamivir), Tamiflu (oseltamivir phosphate) and generic rimantadine HCL make up the influenza antiviral market

**Based on the US Census' estimated 2008 population

IMS Data Source: Xponent

Influenza Antiviral Prescriptions Per Capita

California by County

Oct 2009



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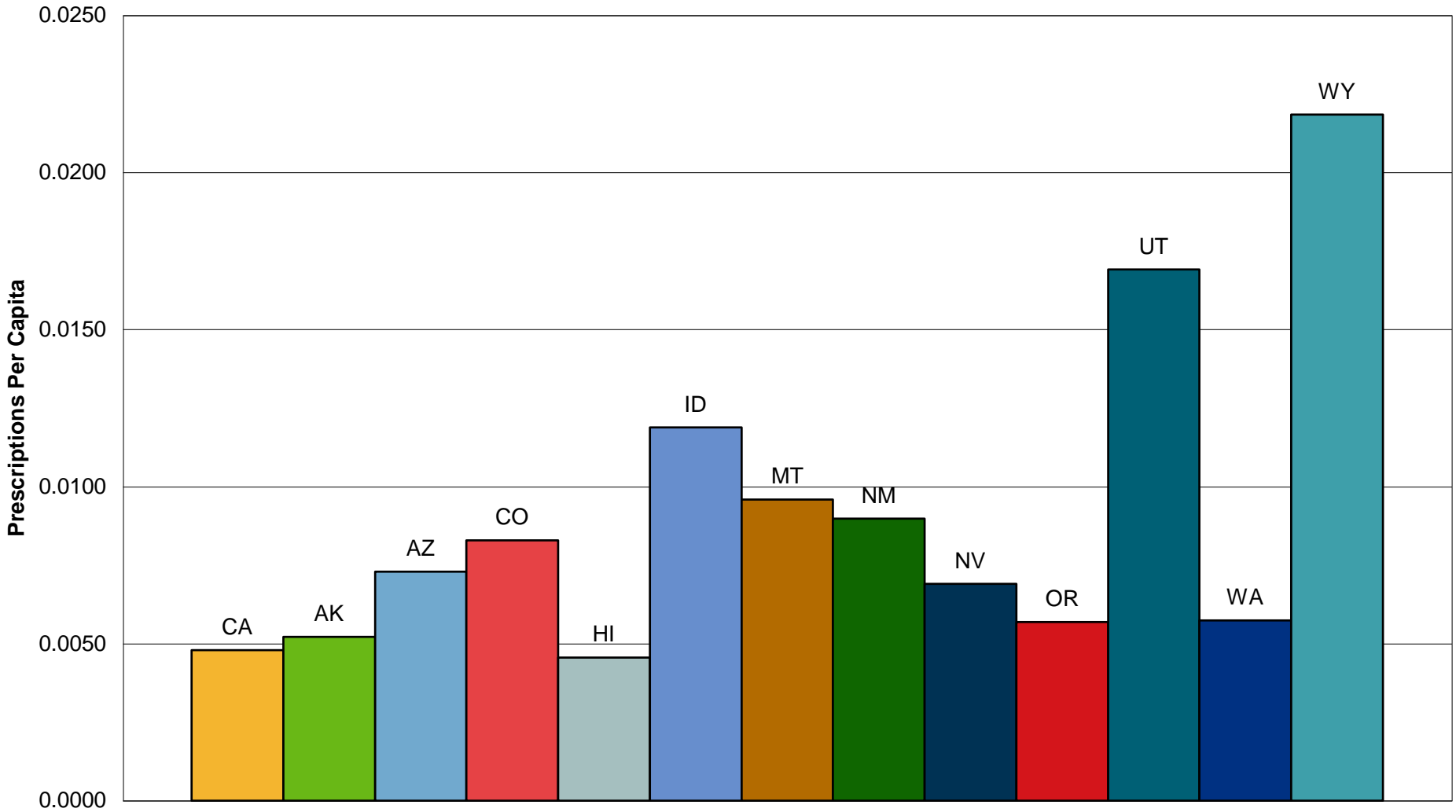
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IMS Data Source: Xponent

Influenza Antiviral* State Per Capita

Region: West

Oct 2009



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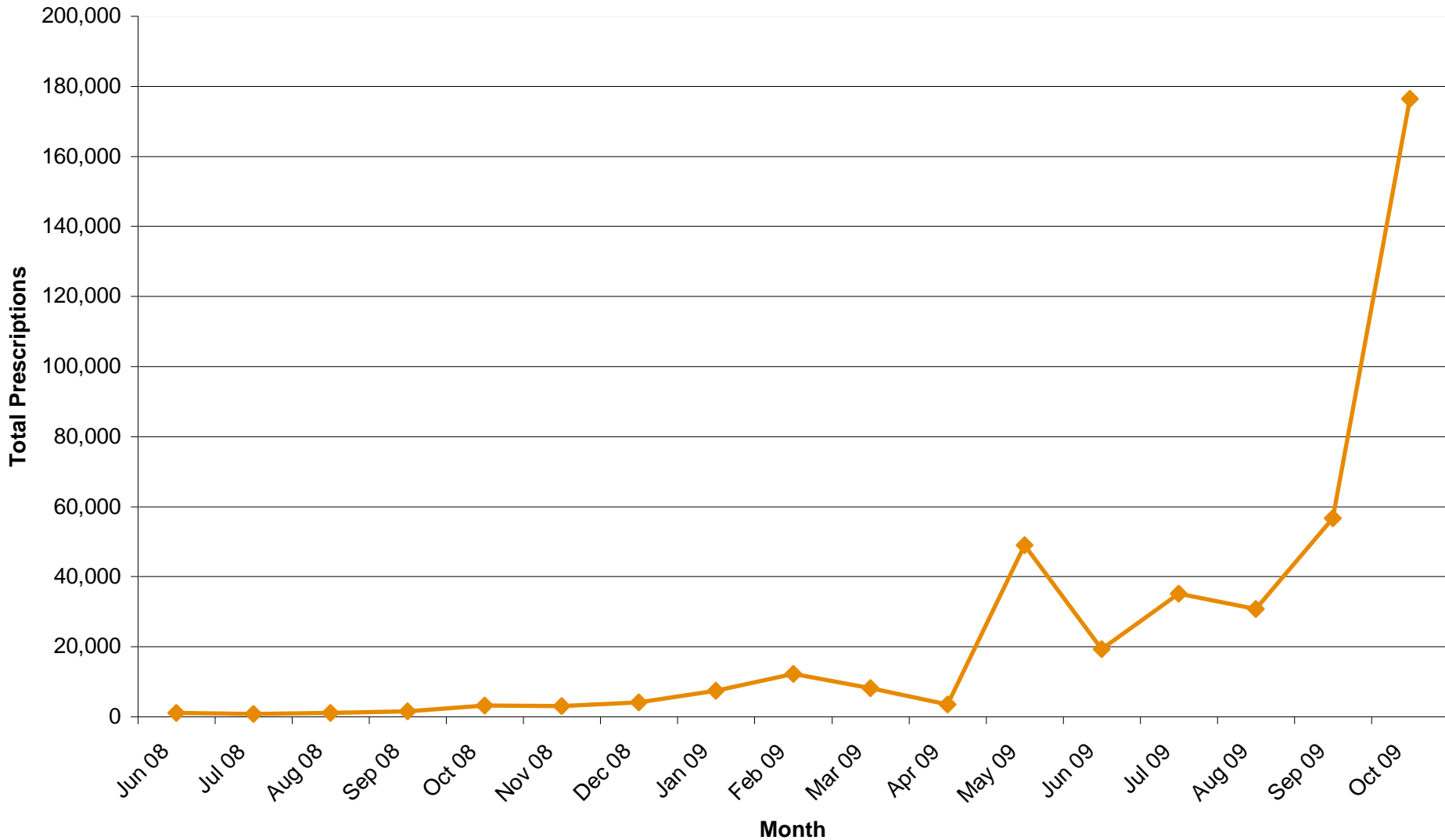
**Based on the US Census' defined regions

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IMS Data Source: Xponent

California Influenza Antiviral* Trend

Jun 2008 - Oct 2009



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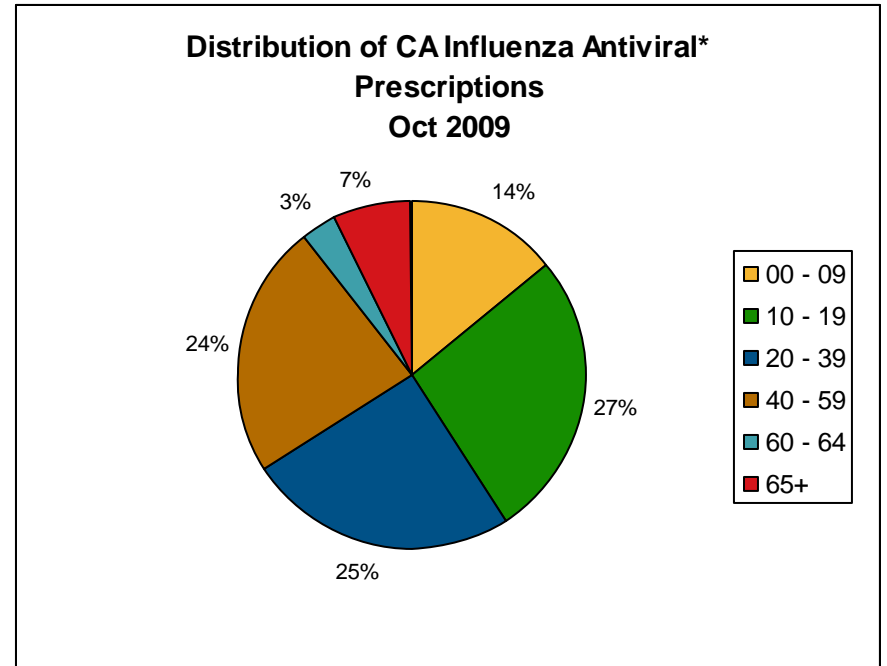
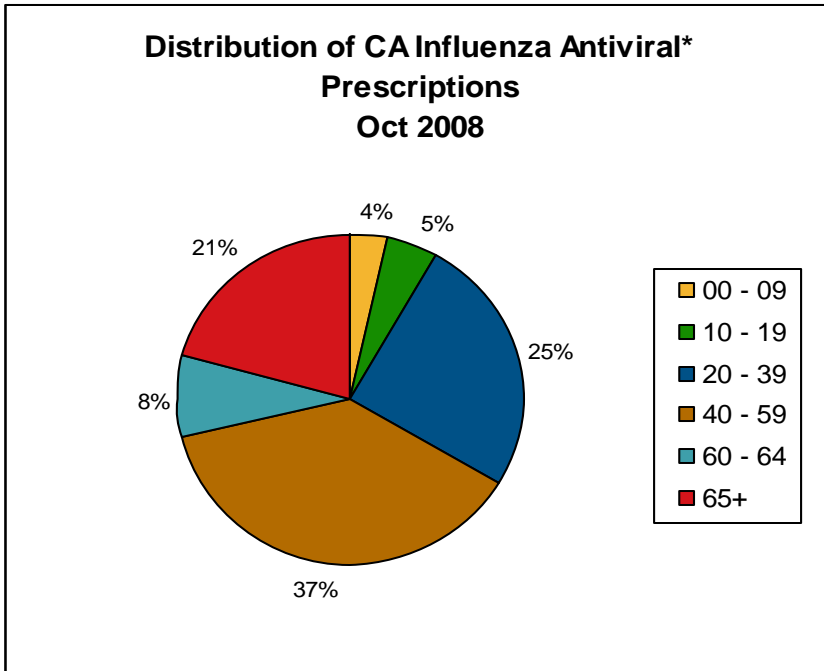
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IMS Data Source: Xponent

Influenza Antiviral* Prescription Report

Age Distribution

State: California



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Ethical principles add guidance with Big Data

- Once you've established whether it is legal...
- You next look to whether it is ethical...
 - What are the proposed purposes for data use and sharing?
 - Does its use have the risk of causing or resulting in foreseeable harm?
 - To whom?
 - How are those risks sufficiently mitigated?
 - Who are the stakeholders and who benefits?
 - What are the benefits?
 - Are the mitigated risks sufficiently balanced by the benefits?
 - Can comparable outcomes be achieved with fewer risks to individuals?
 - What is the perception (by the public, by legislators, by regulators, etc)?
 - * ***Privacy, like medicine, is both art and science. We look first for the legal basis, and we next look to the “soft” side – perception, is it the right thing to do.***