DEPARTMENT OF HEALTH

Minnesota Atlas of Children's Health Care, 2014 - 2015

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Minnesota Atlas of Children's Health Care



- The Minnesota Atlas of Children's Health Care reports on county-level geographic variation in children's health care.
 - 1,329,357 Children (1,114,941 Child-Years)
 - Study Period: July 2014 June 2015
- Utilizes data from the MN APCD
- Shows patterns of care received by nearly the entire Minnesota population of infants and children for 15 measures:
- Health care service use
 - Office visits
 - ED visits

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- Hospitalizations
- Chest X-rays
- Head CT scans

- Prescription drug use/fill
 - Antibiotics

rates

- Gastric acid
 suppressant
- suppressants

 ADHD
- ADHD
 Antipsychotics

- Appropriate treatment
 - Pharyngitis
 - URIs

Some Questions to Consider

- What have we learned?
- How can we best interpret variation?
- To whom might these data be useful?
- What are the policy implications?
- How would additional data enhance the *Atlas*?
- How do we approach engaging stakeholders and communicating the *Atlas*?





Pediatric Health Care Measurement

Question:

• What do we know about pediatric health care use?

Answer:

- Some, but not as much as we do about the 18 – 64 or 65+ populations
- Patchwork of data from different organizations, measuring different things at different levels

APCD

- Vital Records (States/CDC)
 - Fetal/Infant Deaths
- CHIP/Medicaid (States/CMS)
 - Rich data and research literature
 - However, population limited, not fully representative population
- Vaccination Registry
- Hospital Compare
 - Only one measure (out of dozens) pertains specifically to children (asthma admissions)

Why Variation?

- Offers a lens through which to view health care and to think about how to improve it
- Of particular interest is *unwarranted variation*
 - Variation not explained by health needs or care preferences.
 - Represents health system performance and opportunity to improve care.





Measurement of variation can...

Offer information on health care markets

Raise important **questions about** the reasonableness of **practice patterns**

Show what is attainable in quality and efficiency

Generate hypotheses regarding the causes of variation

Help to **develop public reporting** of performance measures

MNTAPCD



Location of Minnesota Children

- The 10 most populous counties (shaded) are home to more than 65% of the children in our study population
 - Hennepin/Ramsey home to >31%

Atlas allows examination of variation across the Twin-Cities, the metro, and greater Minnesota

Percentage of MN children covered by MHCP



Coverage of Minnesota Children

- Commercial insurance: 61.9 percent
- Minnesota Health Care Programs (includes Minnesota's Medicaid program): 38.1 percent
- County rates of Medicaid coverage vary

| Counties with Highest Rates | Counties with Lowest Rates |
|--------------------------------|-------------------------------|
| Mahnomen – 79% | Carver – 17% |
| Beltrami – 66% | Washington – 21% |
| Koochiching – 64% | Roseau – 22% |

Atlas shows measures by payer, and across counties

Map of county rates







Atlas Layout

 The atlas includes 'twopagers' for each of the 15 measures studied.

Office & Clinic Visits (Visits per insured child)



Source: Onpoint Health Data analysis of data from the MN APCD

Results adjusted for age, gender and Medicaid proportion (payer specific rates adjusted for age and gender)

Emergency Room Visits (Visits per 1,000 insured children)



Source: Onpoint Health Data analysis of data from the MN APCD

Results adjusted for age, gender and Medicaid proportion (payer specific rates adjusted for age and gender)

Head CT Scans (Visits per 1,000 insured children)



Source: Onpoint Health Data analysis of data from the MN APCD Results adjusted for age, gender and Medicaid proportion (payer specific rates adjusted for age and gender)

Antipsychotic Medication Use

(Percentage of children with medication fill)



Source: Onpoint Health Data analysis of data from the MN APCD Results adjusted for age, gender and Medicaid proportion (payer specific rates adjusted for age and gender)

Standardized Ratios

Medical Services Utilization



Source: Onpoint Health Data analysis of data from the MN APCD

Standardized Ratios Prescription Use



Source: Onpoint Health Data analysis of data from the MN APCD

Some Caveats

- What are the causes and consequences of variation?
- What is the "right" rate?
 - For some measures (e.g., appropriate care for pharyngitis and upper respiratory infections), it would be the highest rate
 - For most measures, the highest rate is likely not the right rate
 - Overuse, potential harm
- Results were controlled for age, gender and payer
 - But, information on race, ethnicity, language or origin not available in MN APCD

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What does it all mean?

- What do these data tell us?
- What don't/can't they tell us?
- To whom might these data be useful?
 - In what ways?
- What are the policy implications of this work?





Stakeholder Engagement

- What are the key messages?
- What are the opportunities for improvement?
- Deeper dive on some measures to learn more about potential causes of variation?
- Consider other measures?
- Further research?

Internal (MDH) stakeholders

Family/child health Rural health Leadership

Other MN Agencies

MN Children's Cabinet

External stakeholders

Pediatricians, family physicians Patient/child advocates Health equity/access





Thank You!

Health Economics Program: www.health.state.mn.us/healtheconomics

MN All Payer Claims Data: www.health.state.mn.us/data/apcd/publications.html

Contact: Pam.Mink@state.mn.us/ 651.201.3551

Measures in the Atlas

- Common Services
 - ED visits, office visits, & hospital stays
- Diagnostic Imaging
 - Head CT & chest X-rays
- Prescription Drug Use
 - Antibiotics, ADHD medications, acid suppressants and antipsychotic medications
- Appropriate Treatment
 - Sore throats & common cold