

Facilitating Cross-Border Hospitalization Data Exchange

We reviewed the Healthcare Cost and Utilization Project (HCUP) Border Crossing Report from 2015 that suggests that data gaps associated with cross-border migration of residents can be significant in some states. In the report, based on analyses of the HCUP State Inpatient Databases, we reviewed discharges of out-of-state residents in 46 states and the District of Columbia. The percentages of discharges outside the state/district ranged from 0.98 percent to 45.3 percent. Fourteen states had discharges out of state in the range of 5 percent to 10 percent of their residents. Seven states had greater than 10% of their residents getting hospital care in out-of-state facilities. The District of Columbia had 45.3% of hospital discharges for residents coming from outside the District. The average percent across the states for their residents being discharged out of state was 4.18%. After completing our analyses, the 2016 Border Crossing report became available and it appears that there was little variation from 2015. Even with some missing data (non-reporting states and suppressed data), it is evident that there is a fair amount of state border crossing to seek hospital care.

The Table shown below provides greater detail for use by the states.

States with 5 % or more Residents Crossing Border*	Residents crossed to these states (1% or more)			
Arkansas (5.29%)	CA 6.5%	OK 3.2%		
District of Colombia (45.30%)	MD 34.66%	VA 8.66%		
Indiana (6.43%)	IL 2.98%	KY 1.15%		
Iowa (5.95%)	IL 2.82%	NE 1.30%		
Kansas (9.00%)	MO 7.55%			
Kentucky (6.02%)	IN 2.17%	OH 1.42%		
Maryland (6.27%)	PA 1.34%	VA 1.2%	DC 1.11%	
Massachusetts (5.39%)	NH 2.08%			
Missouri (10.4%)	IL 5.64%	KS 2.50%		
Nebraska (8.42%)	IA 5.75%			
Nevada (6.72%)	CA 3.00%	AZ 1.57%		
North Dakota (23.17%)	MN 19.32%	SD 2.07%		
Oregon (5.61%)	WA 3.95%			
Pennsylvania (5.0%)	NJ 2.27%			
Rhode Island (8.35%)	MA 6.29%	CT 1.31%		
South Dakota (14.38%)	MN 5.95%	IA 4.25%	NE 1.72%	
Tennessee (11.36%)	GA 2.84%	VA 2.56%	KY 1.87%	MS 1.39%
Utah (7.03%)	ID 1.68%	NV 1.42%	WY 1.37%	
West Virginia (12.54%)	OH 7.04%	KY 1.66%		

Cross-Border Exchange Challenges

Cross-border data exchange has been a goal for states but it is rife with issues. Efforts have been made by some discharge systems, but a variety of barriers have stymied both discharge systems and end-users of the data. There are issues related to data standards, privacy/reporting, ownership, cost, staffing and more (Van Panhuis et al., 2014). Any one of these issues can overrun the development of data exchange agreements. Yet, there are a number of possible solutions to facilitate discharge data exchange. Potential solutions include: revised or new statutes or rules; model or uniform state law; master data sharing; strong data use agreements or MOUs, and new linkage technology.

Use Case for Cross-Border Data

The customers of cross-border data/information include public health agencies, both state and federal. For example, the Environmental Public Health Tracking Program (EPHT-CDC) has been engaged with states to acquire the data they need to identify and track hospitalizations related to the environment. In some states, they are unable to obtain any hospitalization data from neighboring states; in other states they can only acquire highly summarized information.

Public health uses this data for evaluation and reporting on health issues such as opioid use, environmental impacts on health, the cost of care for those hospitalized with health issues caused by environmental conditions, and cost savings from crossing the border for care delivery.

Specific state public health examples as to why there is a need for border-state exchange follow:

- Vermont—Investigates the impact of Tritium contaminated groundwater from the Vermont Yankee Nuclear Power Site, which borders Massachusetts and New Hampshire required data-sharing to investigate and remediate.
- Washington—Monitors carbon monoxide poisonings from generators and charcoal burners, and higher asthma rates for American Indians and Alaska Natives.
- Wisconsin—Tracks impact of outdoor wood-fired boilers (an energy source) affecting air quality and aggravating lung and heart diseases.
- Colorado—tracks high radon levels that raise cancer risk in the population.
- Florida –Tracks environmental contaminants and birth defects, the leading cause of infant mortality.

- Maryland – Investigates the impact of hazardous wastes and brownfields, and old housing with high lead levels.
- New Mexico—Monitors high uranium levels from well water.
- Utah—Monitors high arsenic levels from well water elevated lead levels in children from soil mine waste.

Early Efforts to Address Cross-Border Exchange

NAHDO established a cross-border team in 2012, focused on identifying key considerations and providing guidance to EPHT grantees. The guidance issued from this included alternative analytic and reporting approaches to avoid re-identification, as privacy concerns had earlier stopped several entities from releasing the out-of-state data. A proposed solution was to provide assurance to data partners through a data-use agreement spelling out the analytics to be used and the reports that would be the result of the data release. They put together general contract language that could be used by other states. The team also recommended a set of common data elements that would meet EPHT’s analytic needs. The data elements could be used to standardize extracts from multiple states—since some states had more than 2 neighboring states. Along with standardized elements, states identified a need for more complete meta-data, that is, better descriptions/definitions of the data elements collected.

Efforts in 2018

AHRQ Partner Survey on Cross-Border Hospitalization Data and Webinar

In August 2018, AHRQ, Watson Health, and NAHDO conducted a short online survey to gather information about Partner experience and interest on the topic of cross-border hospitalization data exchange. Partners were asked to indicate if they had any cross-border data exchanges in place either currently or in the past and, if they did, to describe the program. If no exchange was currently in place, they were asked about the challenges or reasons for not having one. The survey also explored interest in creating data exchanges.

There were 32 Partners that responded. Of these, 16 HCUP Partners (AK, CO, DC, IN, KS, KY, MI, MN, Mo, NC, NE, SC, SD, TN, TX, and VT) indicated they currently have a cross-state data exchange in place; 9 Partners have no cross-state exchange; 7 had a previous exchange that no longer exists; and 13 Partners were interested in establishing a cross-border data exchange, although some would need more information or organizational input.

Among the active exchanges, there was varying experience sharing patient identifiers, with 6 Partners not providing any patient identifiers. Other Partners provide full or partial DOB, with patient ZIP Code or unique patient IDs. Reasons for no longer having an exchange included change in priorities, incompatibility of data source formats, and discrepancies in timelines.

At the HCUP Webinar on September 25, 2018, the Denise Love (of NAHDO) presentation covered the analysis, business case, as well as the challenges for attaining Cross-Border data. Slides from the presentation are available on the HCUP Partner's website. Ms. Love concluded the session by inviting Partners that are interested in cross-border sharing to become actively involved in this work. Filling data gaps is important. Although there was little or no discussion following the presentation, it appears that motivation to create data exchanges is high, even though there are issues to work through. If there is interest in specific topics that are part of an exchange, HCUP could help to facilitate follow-up discussions.