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**Access to Injectable Biologic Medications by Medicare Beneficiaries: Geographic Distribution of U.S. Dermatologist Prescribers**Jeffrey Cohen, MD<sup>1</sup><sup>1</sup>Department of Dermatology, New York University, New York, NY

**Background/Objectives:** Injectable biologics (IB) have emerged as some of the most effective therapies for inflammatory skin disease and this study sought to examine the distribution of U.S. IB-prescribing dermatologists.

**Methods:** This study used Centers for Medicare and Medicaid Services Medicare Provider Utilization and Payment Data: Part D for 2013-2015. Primary outcome measures included the densities of dermatologists who prescribed IB (etanercept, adalimumab, ustekinumab, secukinumab) in each U.S. county for any indication, represented as the number of biologic-prescribers per 100,000 Medicare Part D beneficiaries. Each county was assigned a nine-point Rural-Urban Continuum Code (RUCC) based on size, degree of urbanization, and proximity to metropolitan areas. The proportion of counties in each RUCC with a dermatologist who prescribes biologics was also explored.

**Results:** 2,992 dermatologists (26.3% of dermatologists) prescribed IB in this study.

The national density of IB-prescribing dermatologists was 7.22. Only 778 counties (24.8%) had at least one IB-prescribing dermatologist. The densities of IB-prescribing dermatologists in metropolitan counties were 8.07-8.12. The densities of IB-prescribing dermatologists were 4.55 and 6.51 for urban populations of greater than 20,000 people adjacent and non-adjacent to metropolitan areas, respectively. Urban counties with populations between 2,500-19,999 and adjacent to a metropolitan area had a density of 2.03 and urban counties with the same population and not adjacent to a metropolitan area had a density of 2.84. Completely rural or urban counties with populations under 2,500 people had densities between 2.31-2.35.

**Conclusion:** There are disparities in the availability of IB-prescribing dermatologists across urban-rural geographic settings in the U.S. with greatest access in large urban areas and very limited access in more rural settings.

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**Table 1:** County Characteristics for Biologic-Prescribing Dermatologists (Derms) by Rural Urban Continuum Code (RUCC). Density represented as the number of dermatologists per 100,000 Medicare Part D beneficiaries (MPDB).

RUCC	Description	No. Derms Prescribing Biologics to MPDB	No. MPDB	Density of Derms Prescribing Biologics per 100,000 MPDB	No. Counties	No. Counties without a Derm Prescribing Biologics to MPDB	% Counties without a Derm Prescribing Biologics to MPDB
1	Counties in metropolitan areas of 1 million population or more	1665	20620651	8.07	431	193	44.8
2	Counties in metropolitan areas of 250,000 to 1 million population	740	9111095	8.12	379	183	48.3
3	Counties in metropolitan areas of fewer than 250,000 population	334	4120500	8.11	355	200	56.3
4	Urban population of 20,000 or more, adjacent to a metropolitan area	99	2178029	4.55	214	149	69.6
5	Urban population of 20,000 or more, not adjacent to a metropolitan area	45	691367	6.51	92	60	65.2
6	Urban population of 2,500 to 19,999, adjacent to a metropolitan area	50	2465176	2.03	593	552	93.1

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7	Urban population of 2,500 to 19,999, not adjacent to a metropolitan area	39	1373419	2.84	433	400	92.4
8	Completely rural or less than 2,500 urban population, adjacent to a metropolitan area	9	382825	2.35	220	212	96.4
9	Completely rural or less than 2,500 urban population, not adjacent to a metropolitan area	11	475060	2.32	424	414	97.6
<b>Total</b>		<b>2992</b>	<b>41418122</b>	<b>7.22</b>	<b>3141</b>	<b>2363</b>	<b>75.2</b>

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