



# MEDI-Derm

*Market Research and TAM identification*



# Business to Consumer

*Demographic and TAM identification*

# 1. USA Market

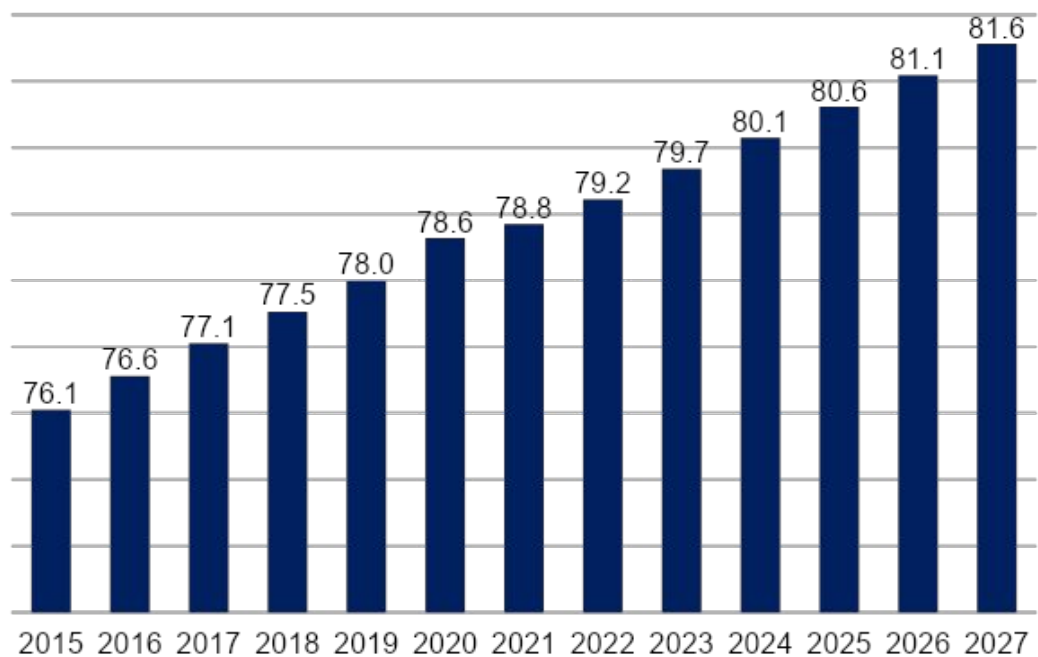


# Target Identification: Elderly

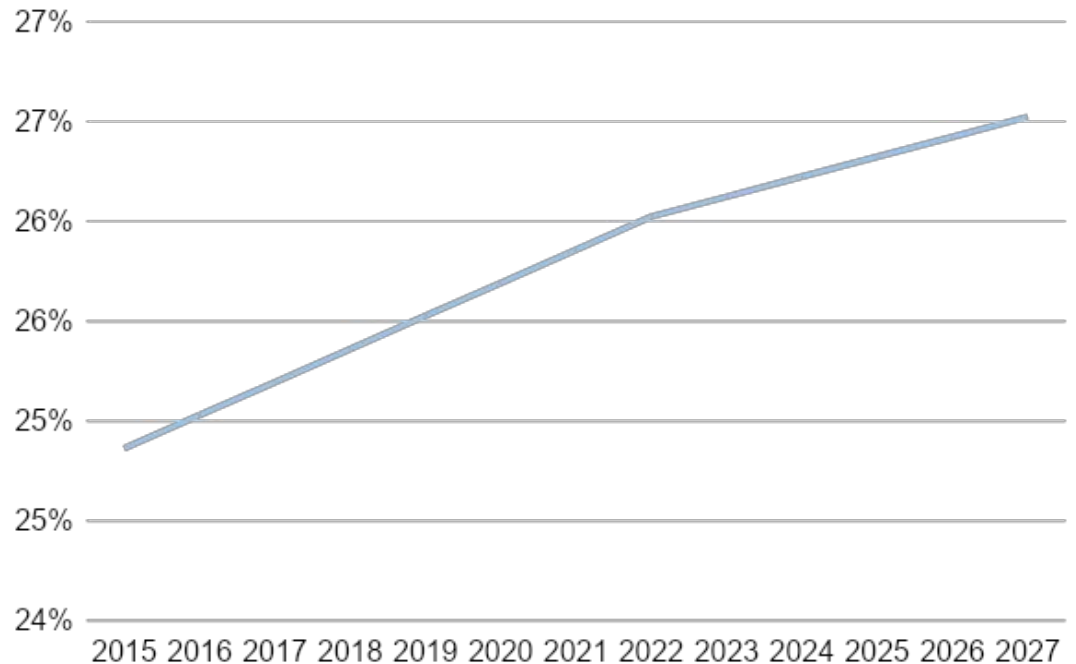
Business to Consumer: USA

- In the US, the number of elderly population, namely those above 60 years old amounted to 79.2 millions in 2022, according to the Statistics Bureau of the United States. This is an increase of about 400k from the previous year. Going forward, we expect the elderly to reach 81.6 millions by 2027.
- Elderly population equals to 26% in 2022, from 25% in 2016. Looking ahead, we expect these to reach 26.5% of total population by 2027, confirming the upward trend of the past years.

Number of elderly population in the USA (millions)



Elderly population in percentage of total population



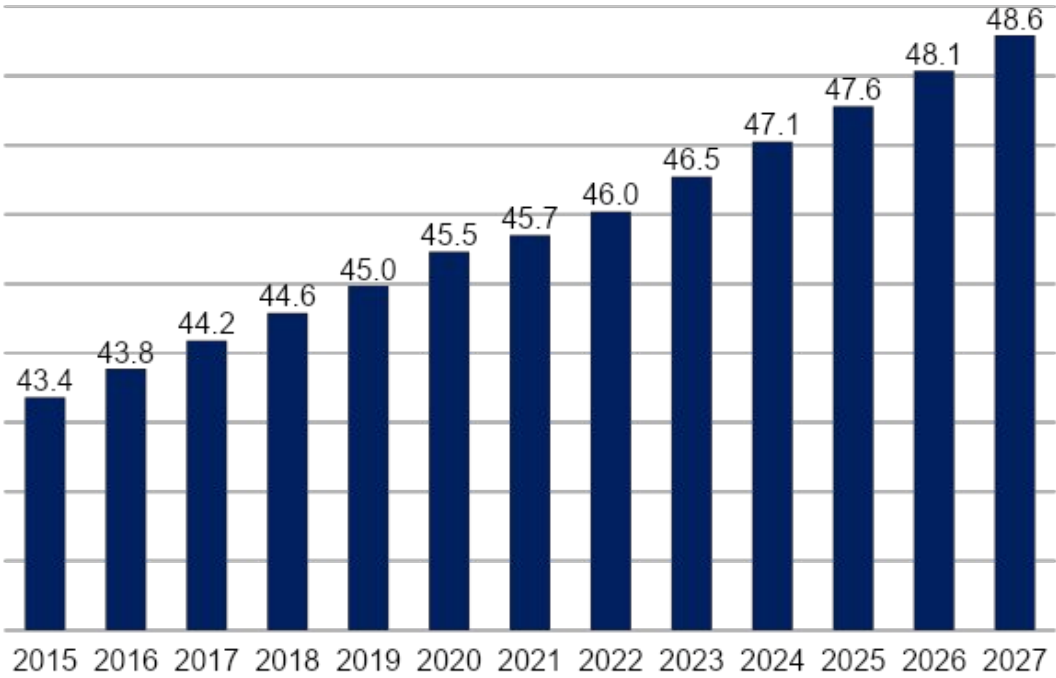
Source: Estimates, US Government Statistics Bureau – Census and Population data  
Estimates: Assumptions take the average growth of previous years

# Target Identification: Living alone

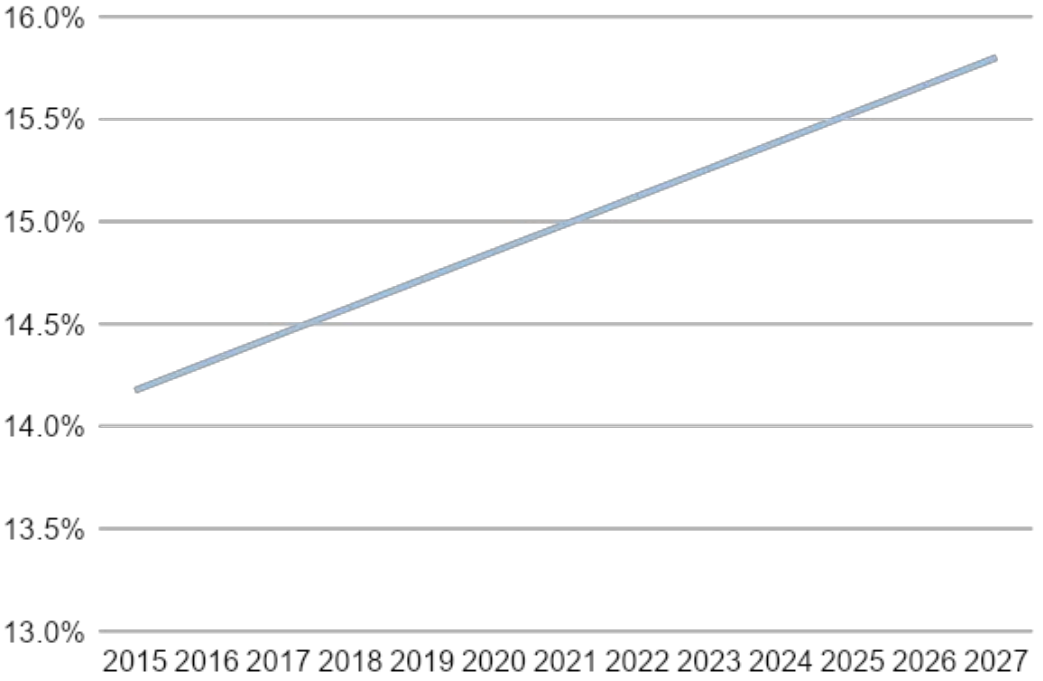
Business to Consumer: USA

- In the US, the number of living alone population, including those below 60 years old amounted to 46 millions in 2022, according to the Census Bureau. This is an increase of about 300k from the previous year. Going forward, we expect the living alone population to reach 48.6 millions by 2027, accounting for an increase in social issues and elderly population.
- Living alone population equals to 15.1% in 2022, from 14.3% in 2016. Looking ahead, we expect these to reach 15.8% of total population by 2027, confirming the upward trend of the past years.

Number of population living alone in the US (millions)



Living alone population in percentage of total



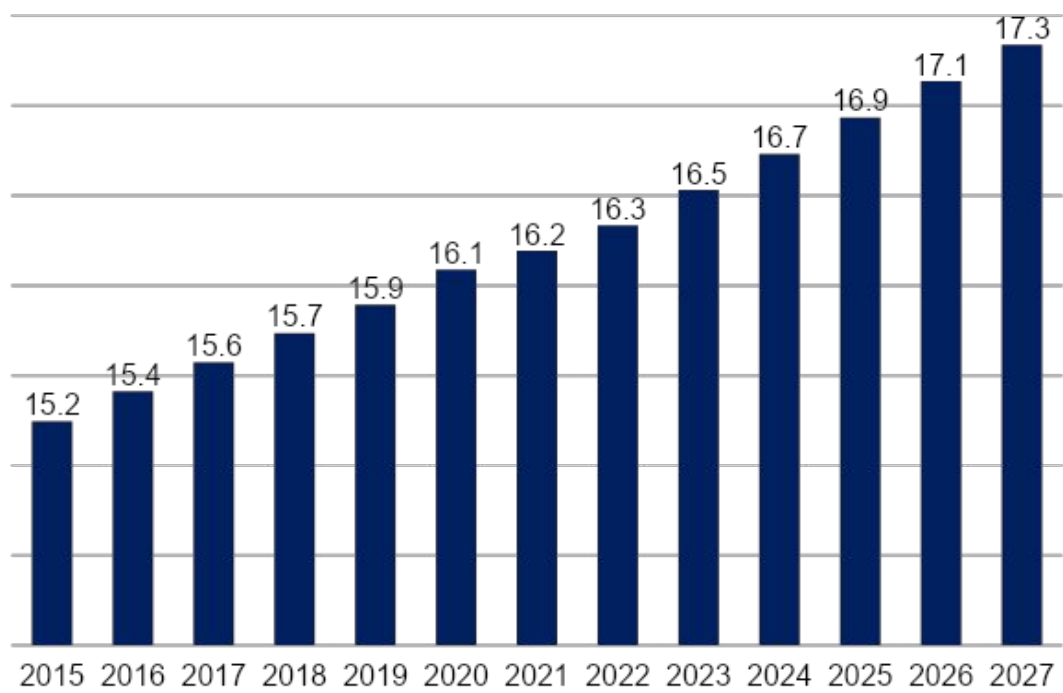
Source: Estimates, US Census Bureau  
Estimates: Assumptions take the average growth of previous years

# Target Identification: Limited mobility

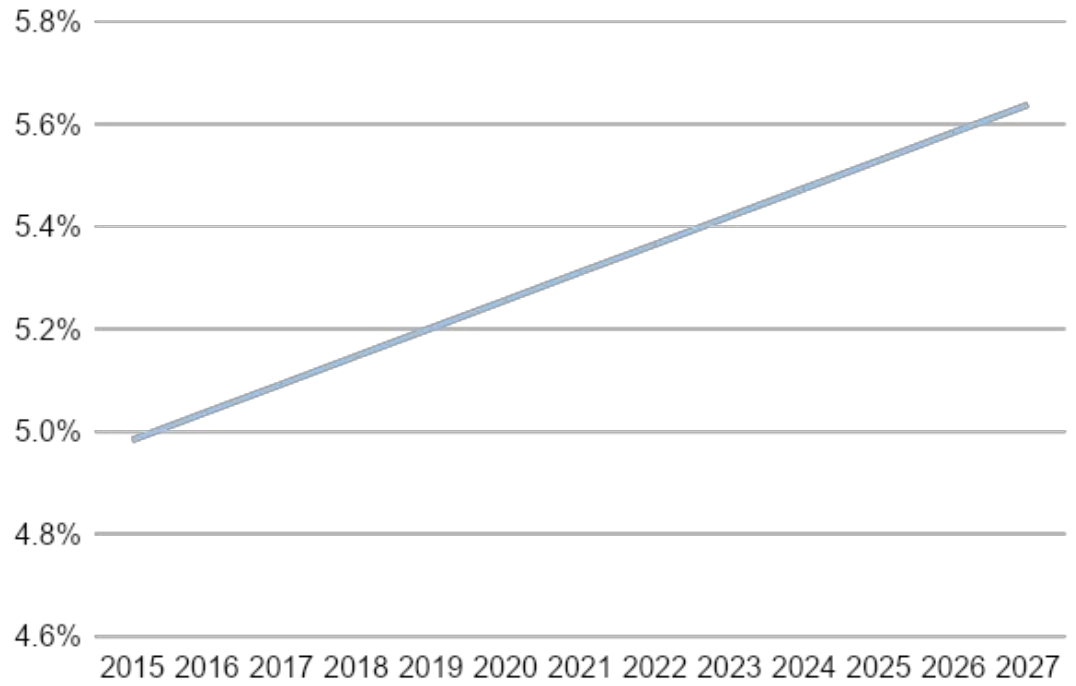
Business to Consumer: USA

- In the US, the number of limited mobility population, including those below 60 years old and veterans amounted to 16.3 millions in 2022, according to The Mobility Resource. This is an increase of about 100k from 2021. Going forward, we expect the limited mobility population to reach 17.3 millions by 2027, accounting for an increase elderly population.
- Limited mobility population equals to 5.4% in 2022, from 5% in 2016. Looking ahead, we expect these to reach 5.6% of total population by 2027, confirming the upward trend of the past years.

Number of population with limited mobility (millions)



Limited mobility population in percentage of total



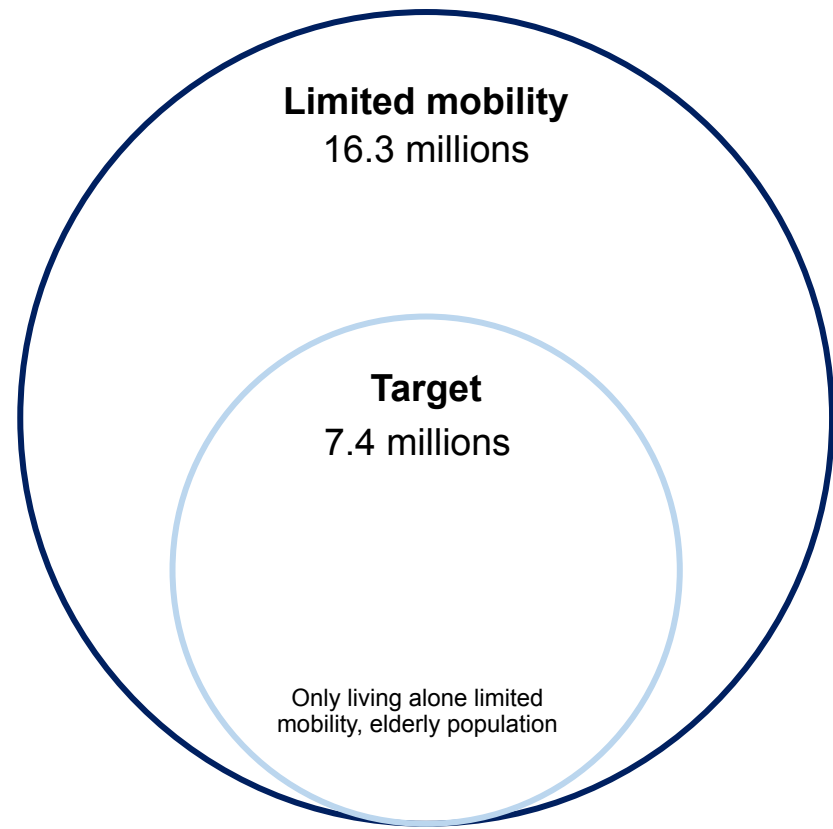
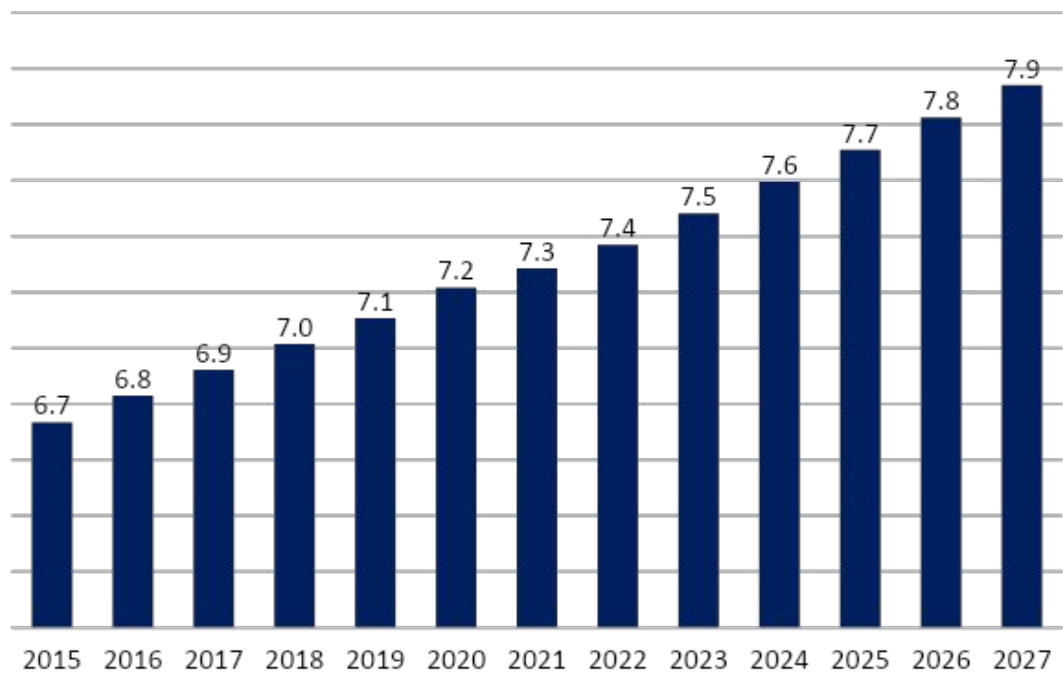
Source: Estimates, The mobility resource  
Estimates: Assumptions take the average growth of previous years

# Target Identification: Potential identifiable target

Business to Consumer: USA

- We have identified a proxy of our potential identifiable target. We took into account the previous statistics and assumptions, and we calculated the target by considering the number of limited mobility population and the percentage of population living alone in the region.
- By applying a markup of 30% to the population living alone, given the higher percentage of elderly population, we estimate a current target of 7.4 millions people in the region.

Number of identifiable target in the US (millions)



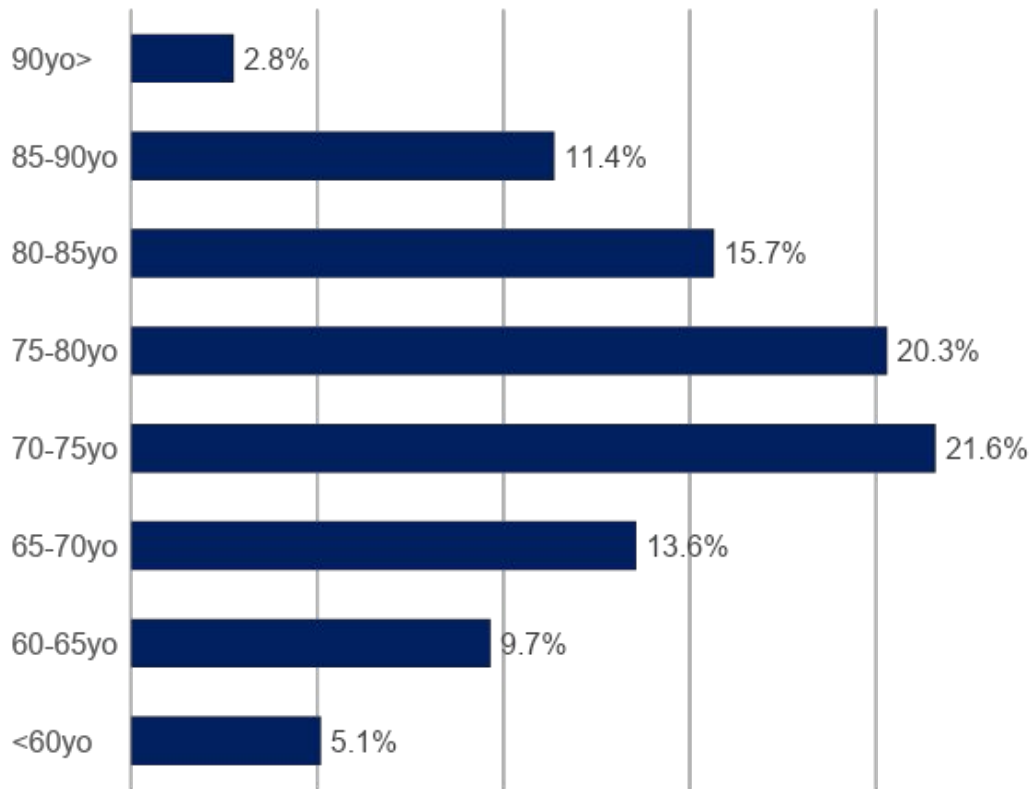
Source: Estimates, The mobility resource, US Census Bureau, US Government Bureau of Statistics  
Estimates: Target is estimated by multiplying the number of limited mobility population by the % of people living alone with a markup of 30%, given the elderly population higher % living alone in certain regions

# Target Identification: Age category

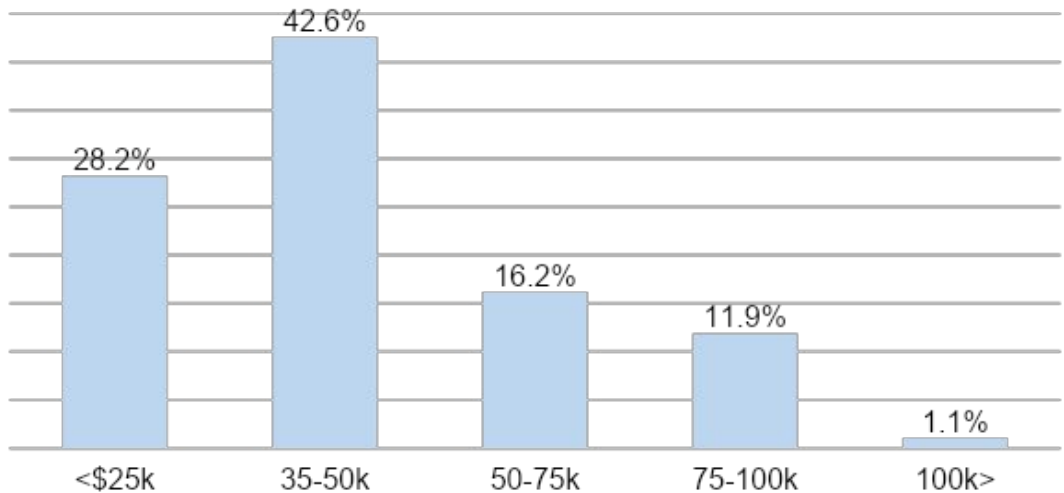
Business to Consumer: USA

- In this section, we look at additional demographic of the identifiable target. We conducted this analysis by considering % of population of age group, income level, and gender category.

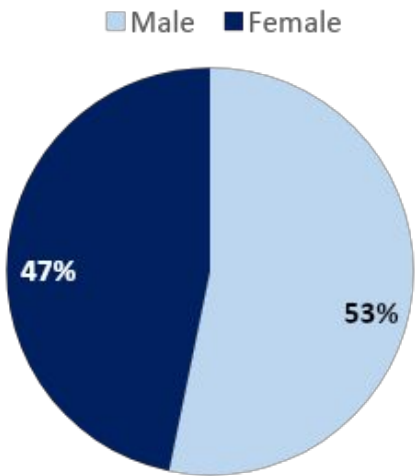
Percentage of Identifiable target by age category



Percentage of identifiable target by income level



Percentage of identifiable target by gender



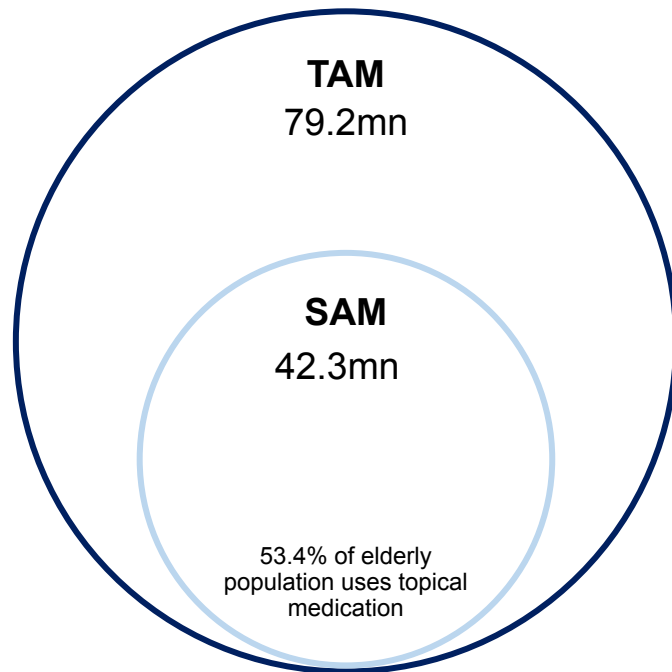


# Target Identification: Topical Medication

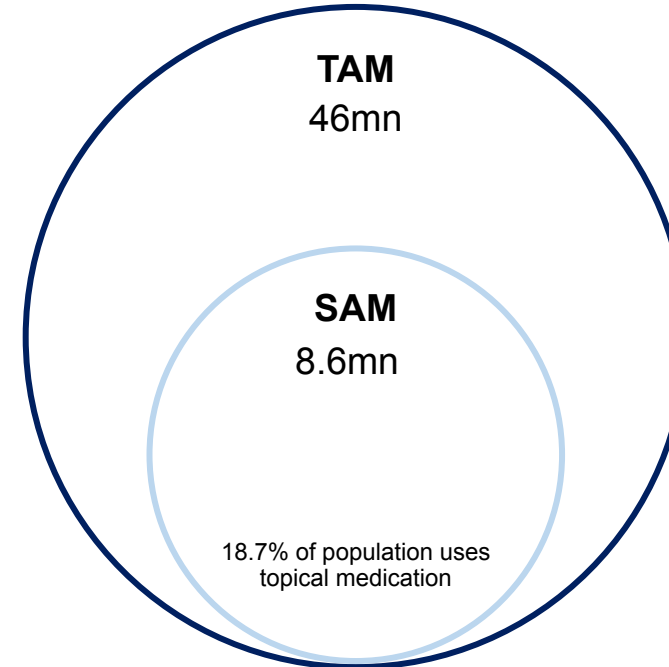
Business to Consumer: USA

- We identified the number of people using topical medication by target group using ICON global medication use paid database. We note that for the Elderly population, the number of these that actively use topical medication is 42.3mn, or 53% of total sample population (TAM)
- Differently, people living alone use topical medication only 19% of the times, amounting to 8.6mn in 2022. This is mostly due to the group as it includes young age adults as well.

## TAM and SAM for Elderly Population



## TAM and SAM for Living Alone Population

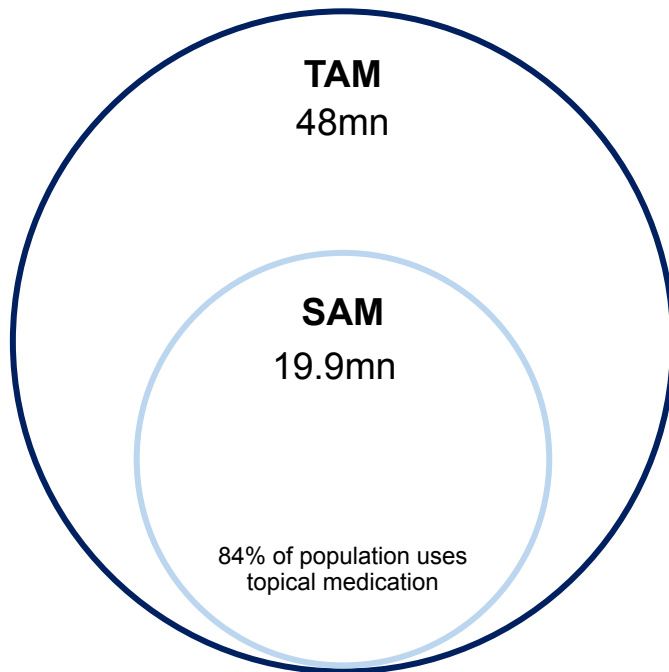


# Target Identification: Topical Medication

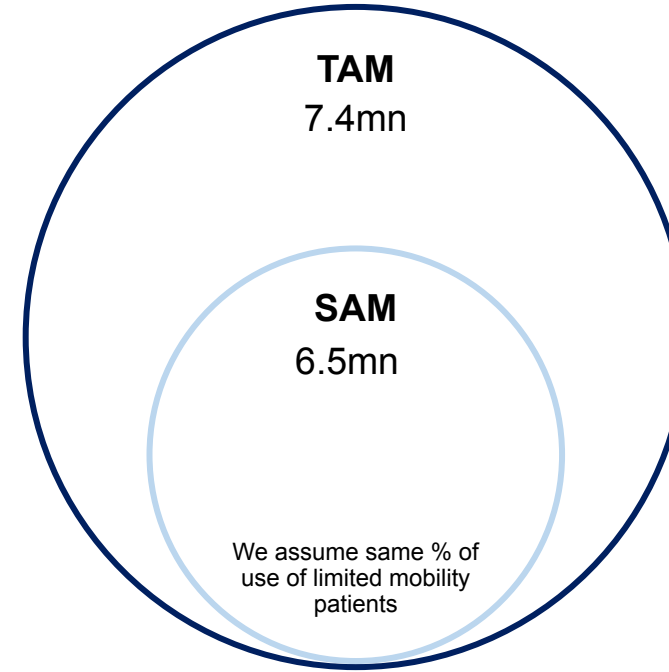
Business to Consumer: USA

- We identified the number of people using topical medication by target group using ICON global medication use paid database. We note that for the Limited Mobility population, the number of these that actively use topical medication is 19.9mn, or 84% of total sample population (TAM)
- For the previously identified target, we assume the use of topical medication to be the same as the limited mobility population, reaching a SAM of 6.5mn.

## TAM and SAM for Limited Mobility Population



## TAM and SAM for Identifiable Target Population

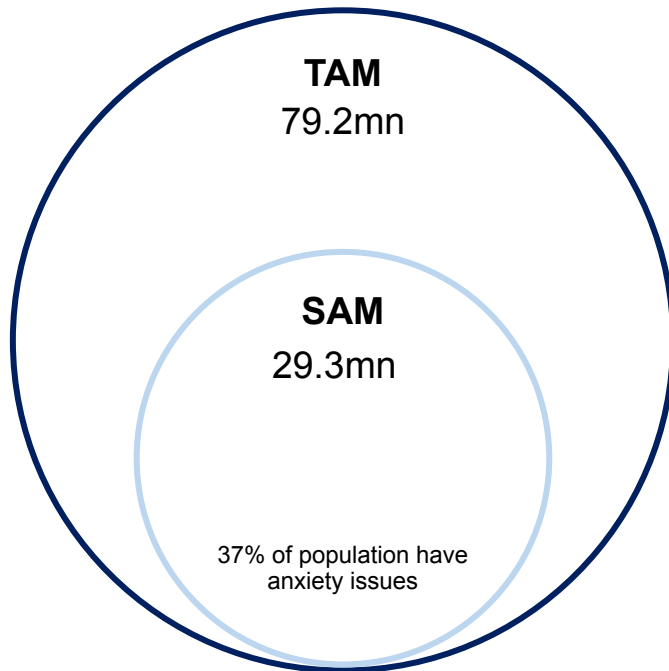


# Target Identification: Anxiety

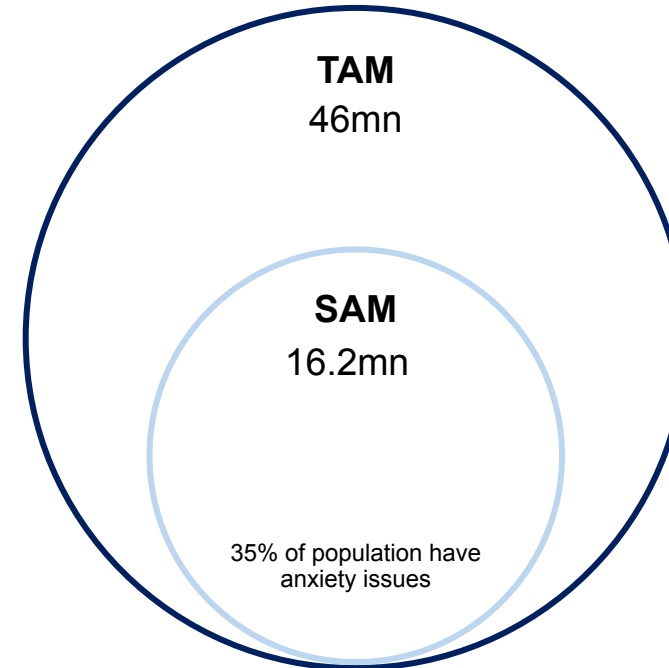
Business to Consumer: USA

- We identified the number of people with anxiety issues by target group using ADAA findings. We note that for the Elderly population, the number of these that have anxiety issues is 29.3mn, or 37% of total sample population (TAM)
- Differently, people living alone have anxiety for 35% of the times, amounting to 16.2mn in 2022.

## TAM and SAM for Elderly Population



## TAM and SAM for Living Alone Population

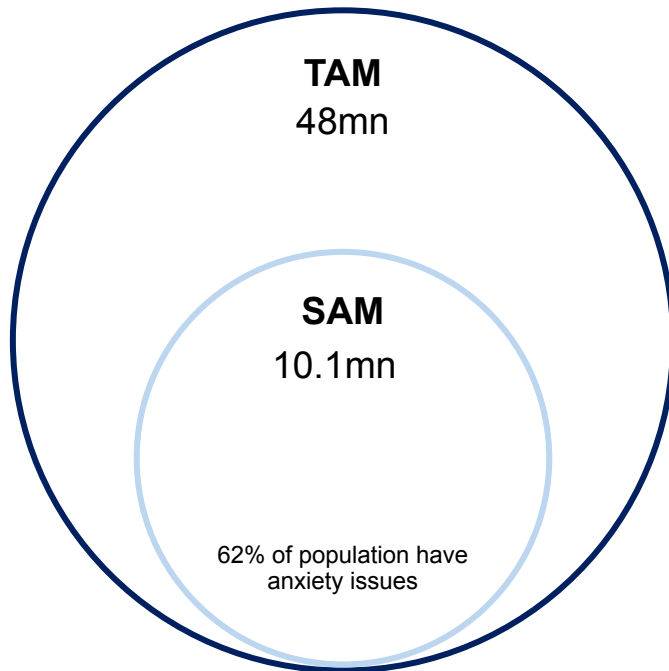


# Target Identification: Anxiety

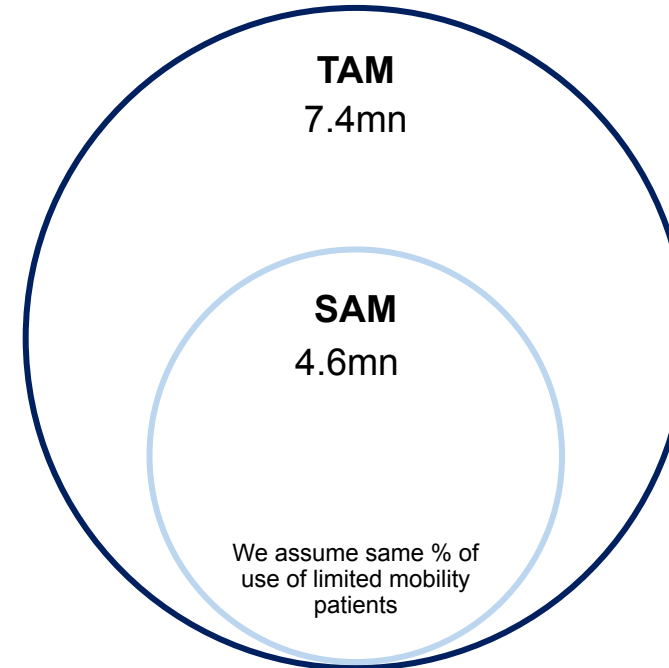
Business to Consumer: USA

- We identified the number of people with anxiety issues by target group using ADAA findings. We note that for the Limited Mobility population, the number of these that have anxiety issues is 10.1mn, or 62% of total sample population (TAM)
- For the previously identified target, we assume the anxiety issues weight to be the same as the limited mobility population, reaching a SAM of 4.6mn.

## TAM and SAM for Limited Mobility Population



## TAM and SAM for Identifiable Target Population

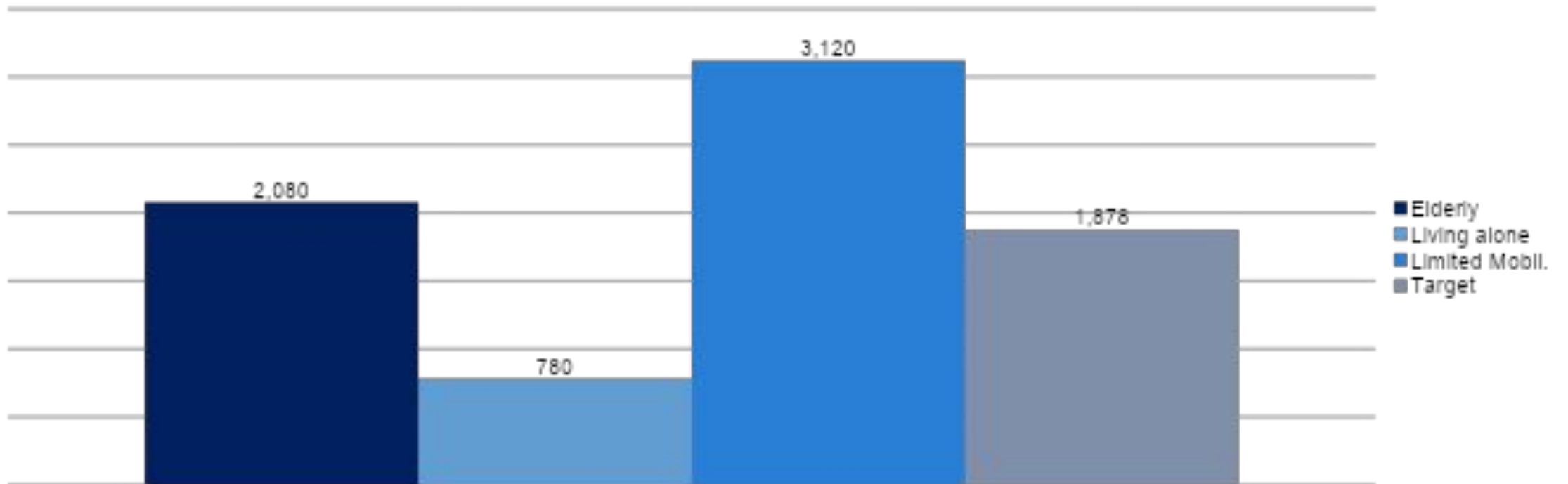


# Financials: Cost of Mental Health Services

Business to Consumer: USA

- We estimated the cost of mental health services that our categories pay or get reimbursed every year. We made different assumptions which are listed below in the Estimates note.
- We estimate that each Elderly patient is paying \$2,080 per year, Living alone \$780, Limited Mobility \$3,120, and the previously identified Target \$1,878.

## Estimated annual cost of mental health services (including reimbursement) per year per patient



Source: Estimates, ADAA, Mental Health Foundation

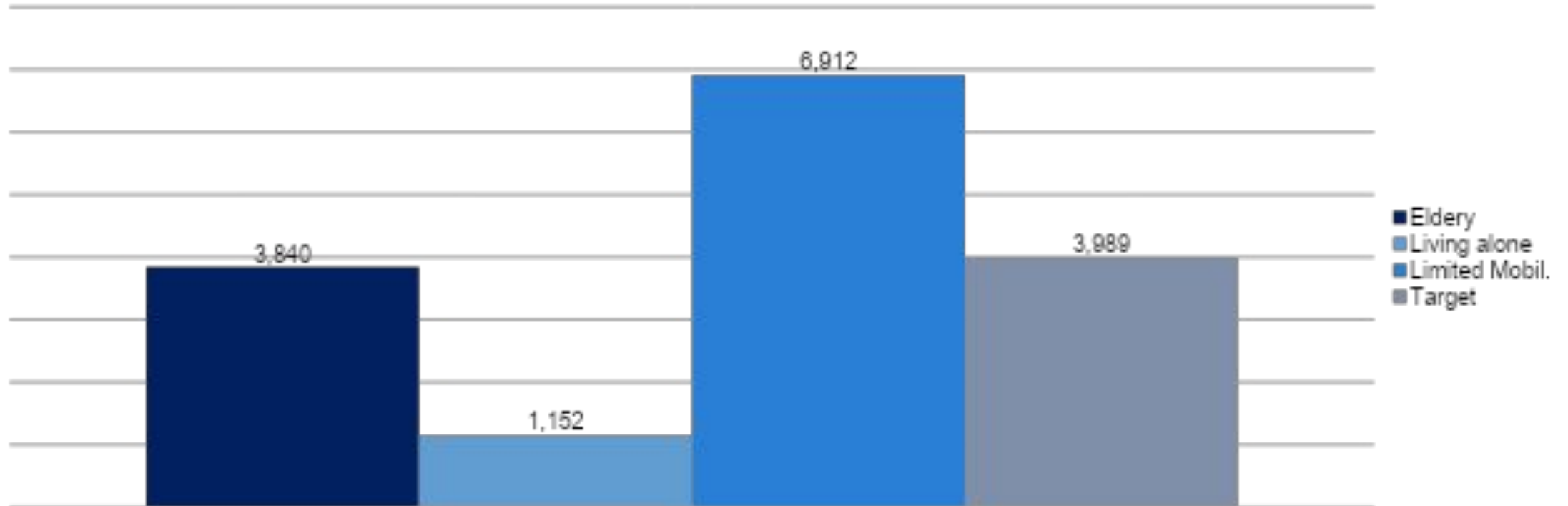
Estimates: Elderly: 2hrs a week for 4 months. Living Alone 1hr a week for 3 months, Limited mobility 2hr a week for 6 months, Target 2hrs a week for 4 months. Assuming \$65/hr

# Financials: Cost of Visiting Nurse

Business to Consumer: USA

- We estimated the cost of visiting nurse that our categories pay or get reimbursed every year. We made different assumptions which are listed below in the Estimates note.
- We estimate that each Elderly patient is paying \$3,840 per year, Living alone \$1,152, Limited Mobility \$6,912, and the previously identified Target \$3,989.

## Estimated annual cost of visiting nurse (including reimbursement) per year per patient



Source: Estimates, Statista

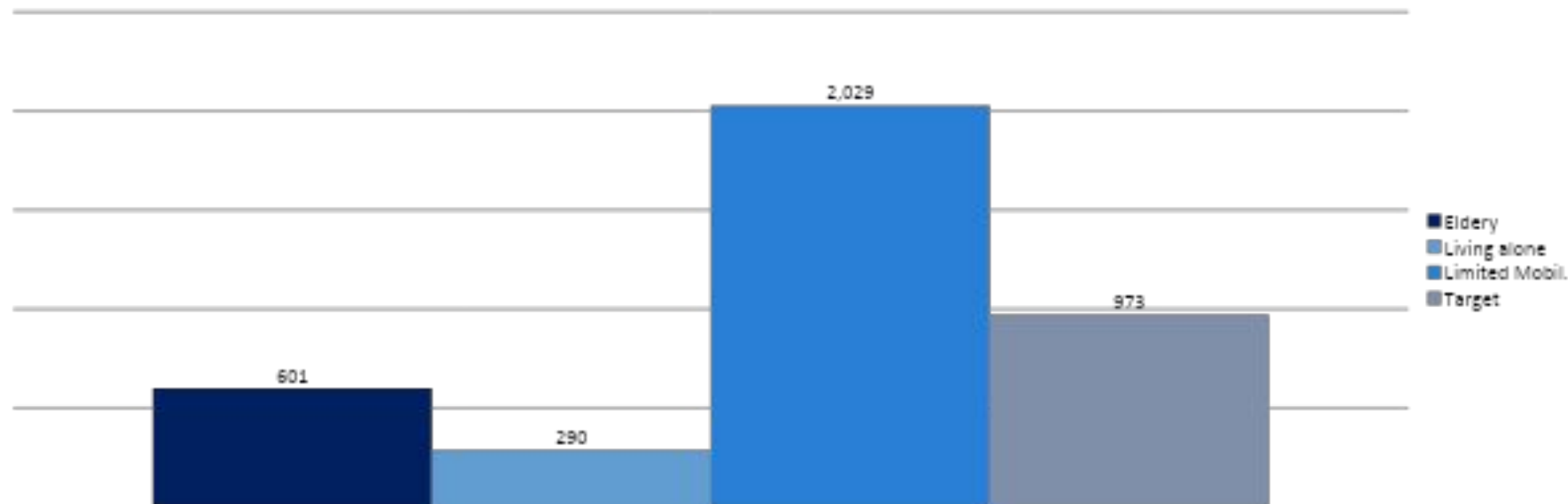
Estimates: Elderly: 4hrs a week for 10 months. Living Alone 1hr a week for 12 months, Limited mobility 6hr a week for 12 months, Target 4hrs a week for 11 months. Assuming \$24/hr

# Financials: Cost of Topical Medication

Business to Consumer: USA

- We estimated the cost of topical medication that our categories pay or get reimbursed every year. We made different assumptions which are listed below in the Estimates note.
- We estimate that each Elderly patient is paying \$601 per year, Living alone \$290, Limited Mobility \$2,029, and the previously identified Target \$973.

## Estimated annual cost of topical medication (including reimbursement) per year per patient



Source: Estimates, DermNet

Estimates: Elderly: 6 grams per day. Living Alone 3 grams per day, Limited mobility 19 grams per day, Target 9 grams per day. Assuming \$25 (99 grams)

# Financials: Benefits of MEDI-Derm

Business to Consumer: USA

- We estimated the potential benefits of MEDI-Derm by applying the reduction of grams left in tube before and after using MEDI-Derm. Our assumptions are shown in the following tables.

**MEDI-Derm can save over 14% on the annual cost for each patient**

Elderly	USA	Living alone	USA	Limited mobility	USA
Grams/day	6	Grams/day	3	Grams/day	19
Grams prod. used	85	Grams prod. used	85	Grams prod. used	85
Grams left in tube	14	Grams left in tube	14	Grams left in tube	14
No. products	24	No. products	12	No. products	81
Avg cost/product	25	Avg cost/product	25	Avg cost/product	25
\$ Cost/year w o MEI	601	\$ Cost/year w o MEI	290	\$ Cost/year w o MEI	2,029
\$ Cost/year w MED	516	\$ Cost/year w MED	249	\$ Cost/year w MED	1,742
Savings	-14%	Savings	-14%	Savings	-14%

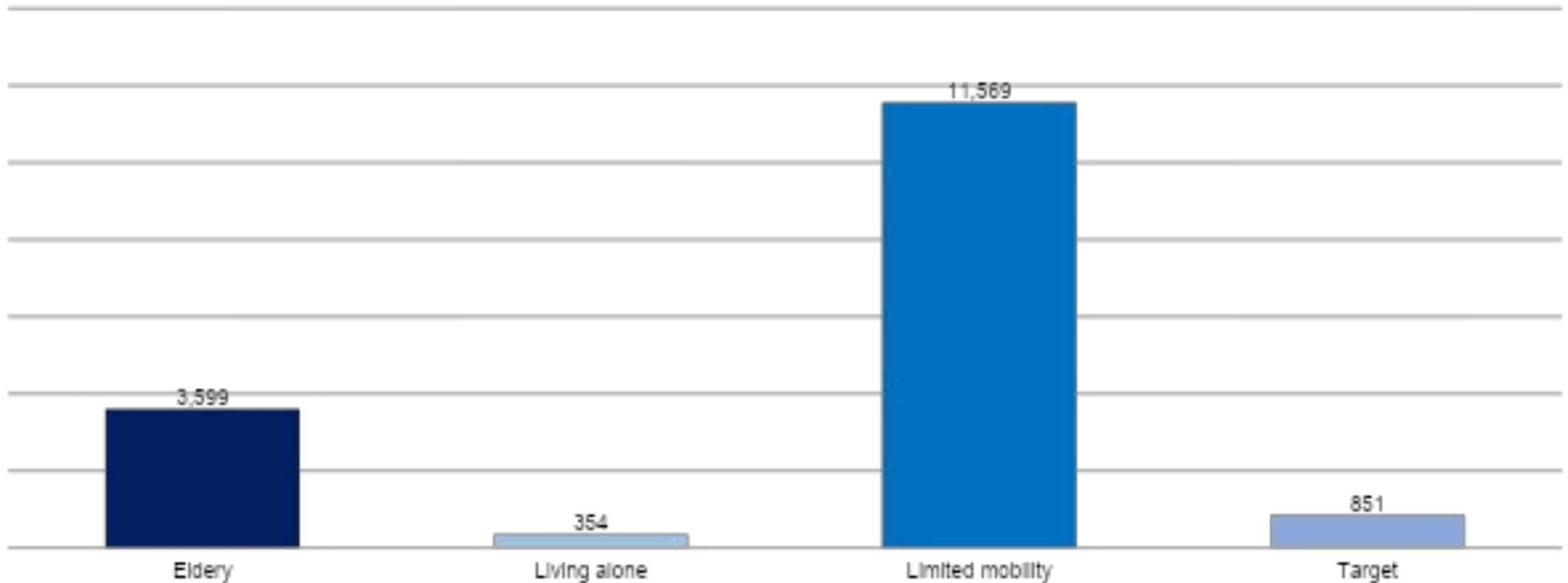


# Financials: Benefits of MEDI-Derm

Business to Consumer: USA

- We estimated the potential benefits of MEDI-Derm by applying the reduction of grams left in tube before and after using MEDI-Derm. Our assumptions are based on previous tables and assumptions.

**MEDI-Derm can save over \$16bn per year to our target groups (numbers in \$ millions)**



Source: Estimates

For the Target group we take an average of the three categories and previous assumptions.

# Other: Benefits of MEDI-Derm

Business to Consumer: USA

- We further investigated the relationship between physical autonomy and depression in individuals. In particular, we have first analysed the population 65 years old and above and defined the factors affecting these variables.
- We used an academic (yet quantitative) study conducted by the University of Health Sciences of Turkey and other relevant practitioners.
- This study was conducted at the geriatric outpatient clinic of Gülhane Training and Research Hospital. The sample of the study consisted of 101 patients over 65 years of age, the ability to evaluate the truth was not impaired, there was no diagnosis of mental illness, and they accepted to participate in the study. The data were collected by using the “Descriptive Information Form”, “The Functional Autonomy Measurement System-SMAF” and “Geriatric Depression Scale”.
- The autonomy assessment scale total score average of the participants was  $-9.63 \pm 9.17$ . The mean total score of geriatric depression was  $11.15 \pm 7.25$ . There was a negative correlation between geriatric depression scale mean scores and autonomy assessment scale mean scores of elderly individuals and this relationship was statistically significant

## What does this mean for MEDI-Derm?

- It was found that individuals over 65 years of age were at risk of losing their functional independence and that they had possible depression. **Decreased functional independence increases with age and elevates the risk of depression in elderly individuals.**

It is evident that maintaining physical autonomy is crucial for mental well-being. By introducing MEDI-Derm, the target can receive significant benefits that address this relationship between physical autonomy and depression.

## Here's why people using MEDI-Derm would receive benefits based on these findings:

- **Enhanced Sense of Autonomy:** MEDI-Derm empowers individuals by enabling them to independently apply topical medication to areas that would typically require assistance. This improved autonomy can have a positive psychological impact, as it allows individuals to retain a sense of control over their own self-care and promotes a greater sense of self-reliance.
- **Improved Mood and Emotional Well-being:** By utilizing MEDI-Derm, individuals can maintain their functional independence and perform essential self-care tasks without relying on others. This independence contributes to a sense of accomplishment and self-worth, reducing the risk of developing depressive symptoms associated with a loss of autonomy.

# Other: Benefits of MEDI-Derm

Business to Consumer: USA

- **Enhanced Quality of Life:** The ability to use MEDI-Derm and easily access hard-to-reach body parts for medication application promotes overall physical comfort and well-being. When individuals can effectively manage their own care without requiring constant assistance, they experience improved quality of life, which positively influences their mental and emotional state.
- **Reduced Dependency on Others:** With MEDI-Derm, individuals may experience decreased reliance on nursing assistants or caregivers for medication application. This reduction in dependency can help alleviate feelings of burden, guilt, or frustration that may arise from constantly needing assistance. Consequently, the risk of developing depression due to a sense of helplessness or loss of independence is minimized.

By providing a solution that enables individuals with limited mobility and the elderly to independently and effectively apply topical medication, MEDI-Derm addresses the identified risk factors associated with decreased functional independence and subsequent depression. Through its promotion of physical autonomy and self-care, MEDI-Derm has the potential to enhance mental well-being, foster a sense of empowerment, and contribute to an improved overall quality of life for its users.



# Business to Business

*Target and TAM identification*

# 1. USA Market

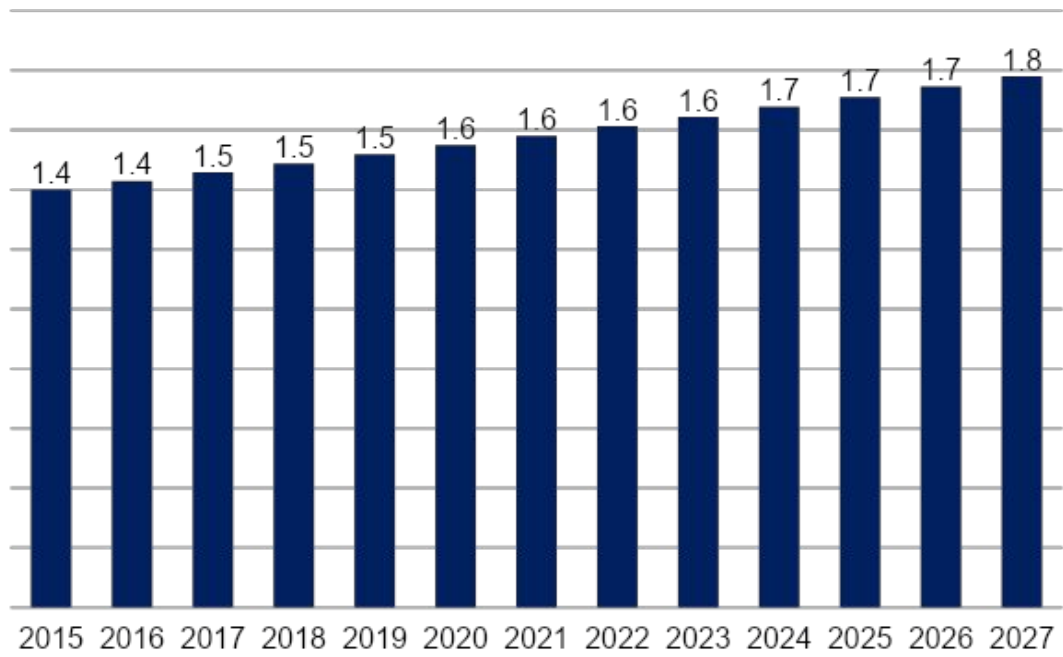


# Target Identification: Nurses in home agencies

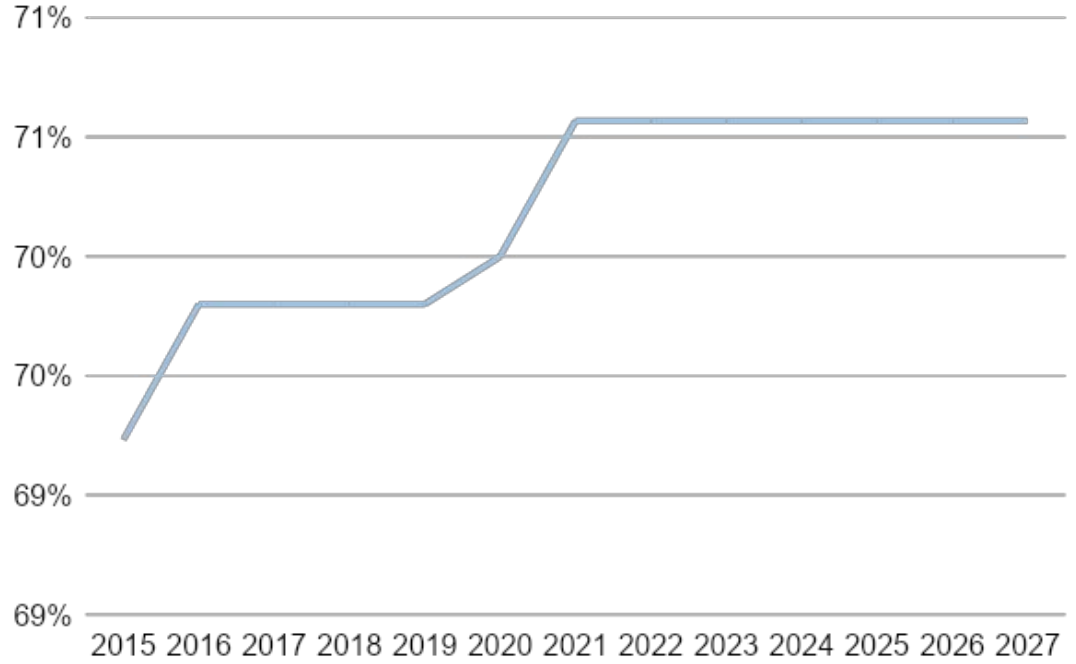
Business to Business: USA

- In the USA, the number of registered nurses in home health agencies is 1.6mn, which represent an increase of about 100k from the previous year.
- Of these, 71% are allowed to administer medication to the patients. This percentage has grown given the highest penetration of registered and educated nurses over time.

Number of registered nurses in home health agencies (millions)



Percentage of nurses administering medication in home health agencies services



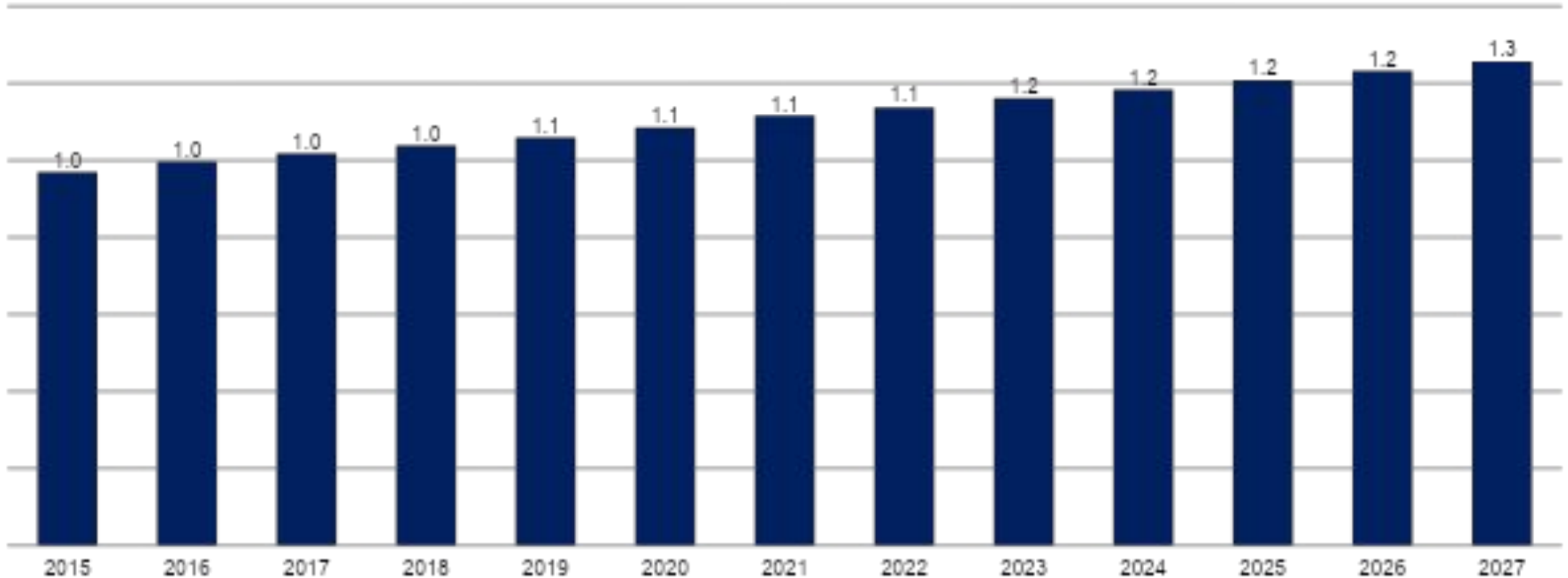
Source: Estimates, BLS  
Estimates: Assumptions take the average growth of previous years

# Target Identification: Nurses in home agencies

Business to Business: USA

- Therefore, in the US, the number of nurses allowed to administer medication is 1.1mn, which represents an increase of about 50k nurses from previous year.

**Number of registered nurses in home health agencies allowed to administer medication (millions)**



Source: Estimates, BLS

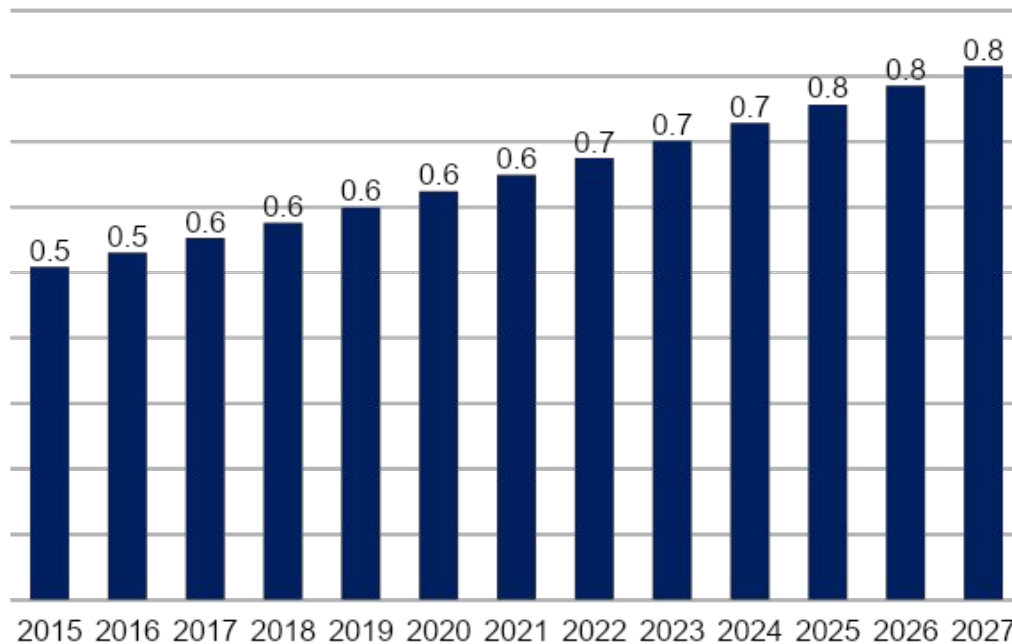
Estimates: Assumptions take the average growth of previous years

# Target Identification: Nurses in geriatric communities

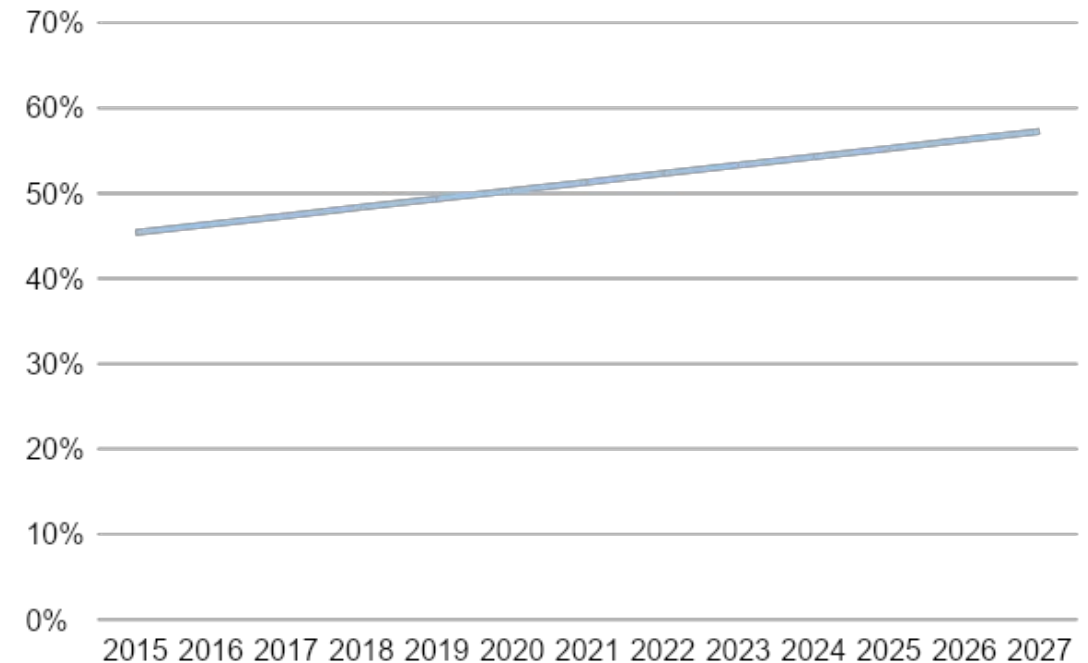
Business to Business: USA

- In the USA, the percentage of registered nurses working in geriatric communities amounts to 52% in 2022 versus 45% seven years before.
- Of these, 80% are allowed to administer medication to the patients. Therefore, the total number of nurses working in geriatric communities (both full-time or part-time) is 700k, +100k from the previous year.

**Number of registered nurses working in geriatric and allowed to administer medication (millions)**



**Percentage of nurses working in geriatric communities (% of total registered nurses)**



Source: Estimates, BLS

Estimates: Assumptions take the average growth of previous years

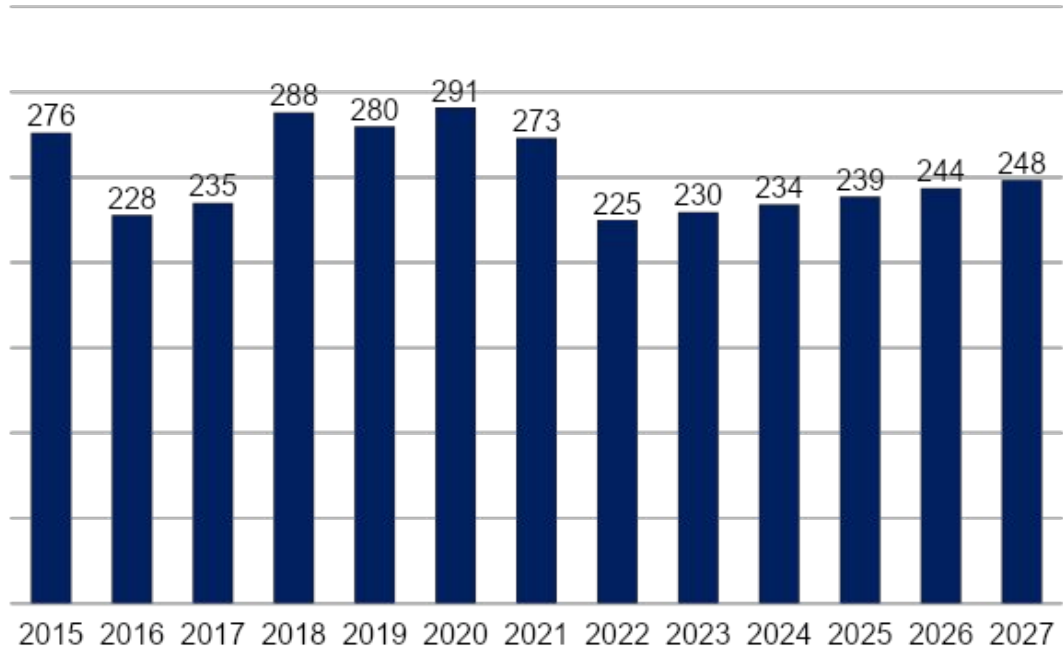


# Financials: Reimbursement

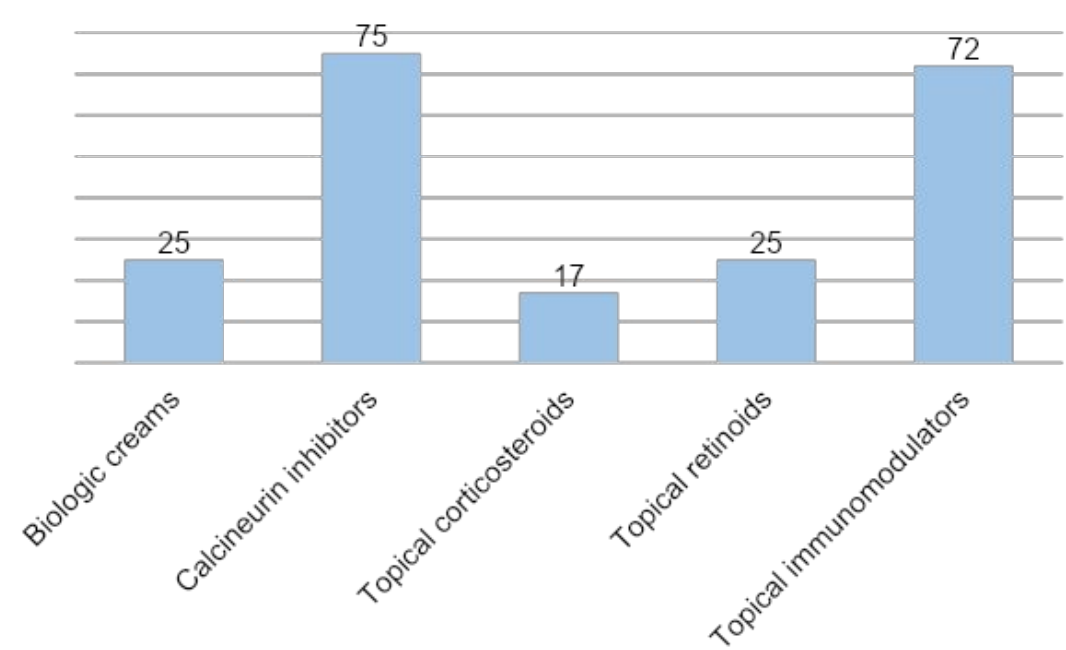
Business to Business: USA

- In the USA, the average reimbursement for skilled nursing care per day was \$225 in 2022, a decrease of about \$50 from the previous year, mostly due to the specialization of the nurse and type of nursing care requested, which varies annually.
- Differently, we identified the average cost of semi solid compounds approved by FDA and dedicated solely to medication. Biologic creams costs \$25 per product on average. Calcineurin inhibitors \$75, Topical corticosteroids \$17, Topical retinoids \$25, and Topical immunomodulators \$72.

**Average reimbursement for skilled nursing care per day in \$USD**



**Average cost of semi solid compounds approved by FDA and dedicated solely to medication (\$USD/product)**



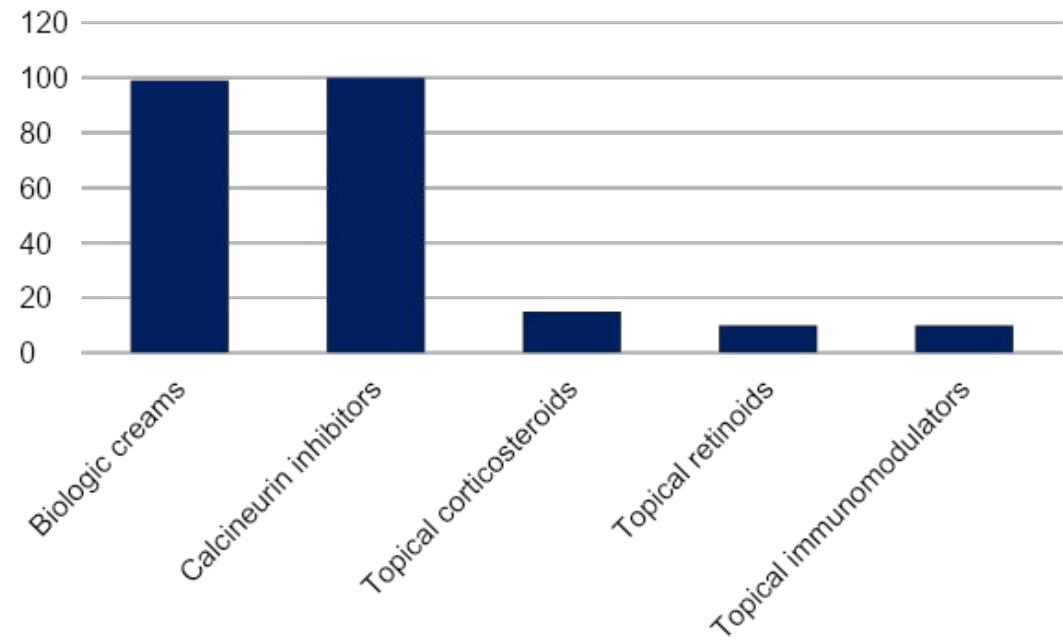
Source: Estimates, BLS  
Estimates: Assumptions take the average growth of previous years

# Financials: MEDI-Derm Benefits

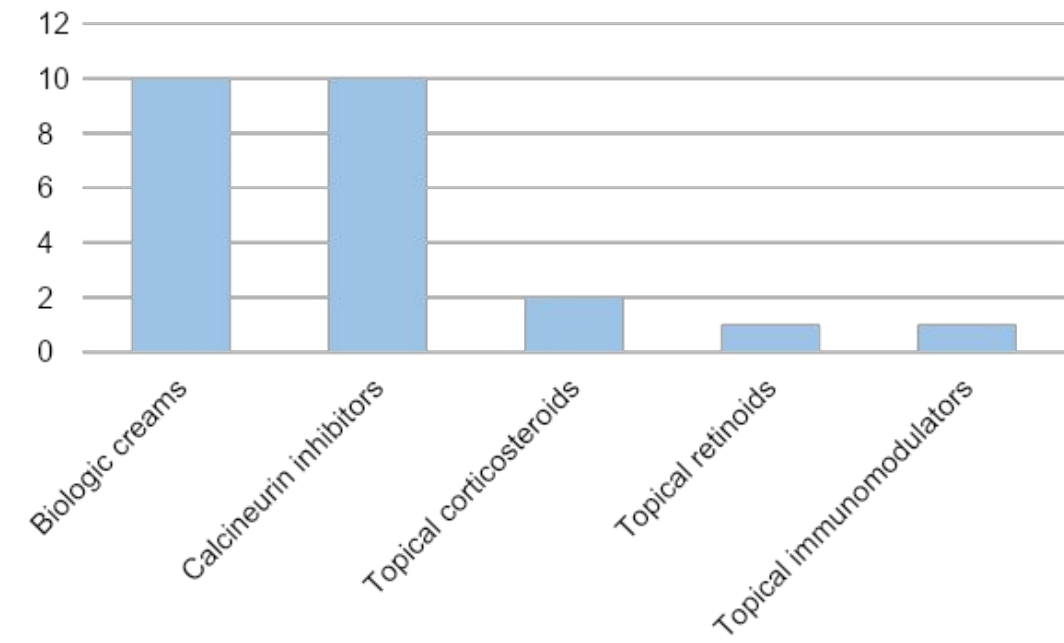
Business to Business: USA

- The average dosage of semi solid compounds approved by FDA varies according to the product. For biological creams this is 99 grams (3.5oz), Calcineurin inhibitors 100 grams, Topical corticosteroids 15 grams, Topical retinoids 10 grams, and Topical immunomodulators 10 grams.
- According to institutional research backed by our forum’s analysis, the average dosage left in the tube before throwing the medication is 10% of the product dosage as indicated in the chart on the right.

Average dosage of semi solid compounds approved by FDA (grams)



Average dosage left in the tube before throwing the medication (grams)



Source: Estimates

# Financials: MEDI-Derm Benefits

Business to Business: USA

- We estimated the potential benefits of MEDI-Derm by applying the reduction of grams left in tube before and after using MEDI-Derm. Our assumptions are shown in the following tables.

**MEDI-Derm can save over 14% on the annual cost for each patient**

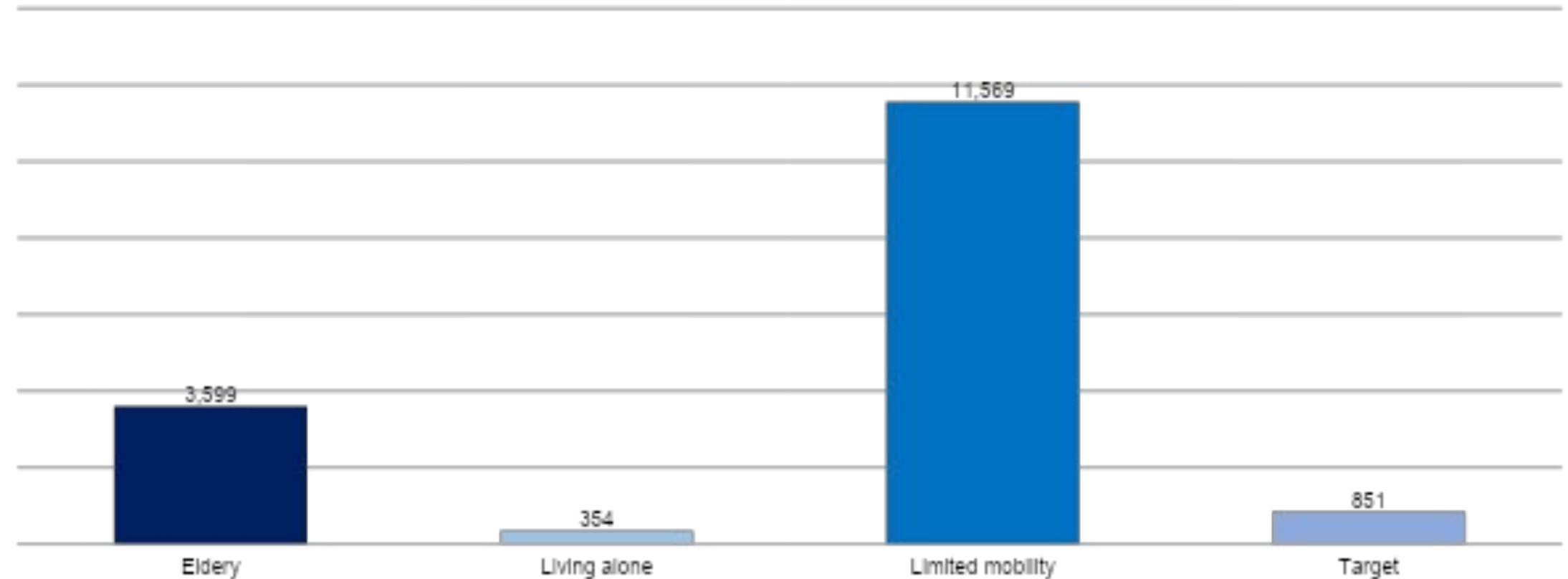
Elderly		Living alone		Limited mobility	
	USA		USA		USA
Grams/day	6	Grams/day	3	Grams/day	19
Grams prod. used	85	Grams prod. used	85	Grams prod. used	85
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Avg cost/product	25	Avg cost/product	25	Avg cost/product	25
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Savings	-14%	Savings	-14%	Savings	-14%

# Financials: MEDI-Derm Benefits

Business to Business: USA

- We estimated the potential benefits of MEDI-Derm by applying the reduction of grams left in tube before and after using MEDI-Derm. Our assumptions are based on previous tables and assumptions.

**MEDI-Derm can save over \$16bn per year to insurances and related associations (numbers in \$ millions)**



Source: Estimates

For the Target group we take an average of the three categories and previous assumptions.

# Environmental: Benefits of MEDi-Derm

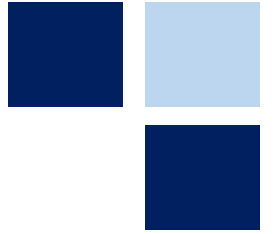
Business to Consumer: All countries

- MEDi-Derm promises to make a profound impact on the environment. By enabling users to extract every last gram of cream from tubes through efficient and innovative squeezing mechanisms, MEDi-Derm ensures that no precious product goes to waste.
- This ingenious technology, backed by estimations of over 6.5 billion grams of plastic saved within a single year, showcases the immense positive influence MEDi-Derm can have on our planet.
- In a world increasingly conscious of its ecological footprint, MEDi-Derm emerges as a beacon of hope, championing environmental responsibility and reshaping the way we perceive and utilize essential products.
- By providing a tangible solution to reduce plastic consumption while enhancing user experience, MEDi-Derm pioneers a brighter, more sustainable future for the pharmaceutical industry and beyond.

## MEDi-Derm can save over 6.5bn grams per year in plastic

	Amount
Product needed w/o MEDI (mn)	570
Product needed w MEDI (mn)	489
Products saved	14%
Plastic per product (grams)	81
<b>Plastic saved (mn grams)</b>	<b>6,524</b>

- We estimate that a single product of an average of 3oz is made of 80.5 grams of plastic.
- Therefore, by assuming a reduction in products needed of 14%, we reach to the conclusion that we are able to save over 6.5bn grams per year (across the three geographies) using our SAM estimation indicated before.



# MEDI-Derm

*Market Research and TAM identification*