



JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH

Identifying High Need High Cost Individuals

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Protecting Health, Saving Lives—*Millions at a Time*

High Cost People

- Topic is reasonably well studied
- Common finding - Small proportion of the population is responsible for a large percentage of health care spending
 - 80/20 rule
- Main differences across cost studies
 - Based on claims data or more comprehensive data sets
 - Percentage or dollar thresholds
 - Time frame
 - One, two, or three years
 - What services are included
 - Long term services and supports
 - Social services (housing, transportation)

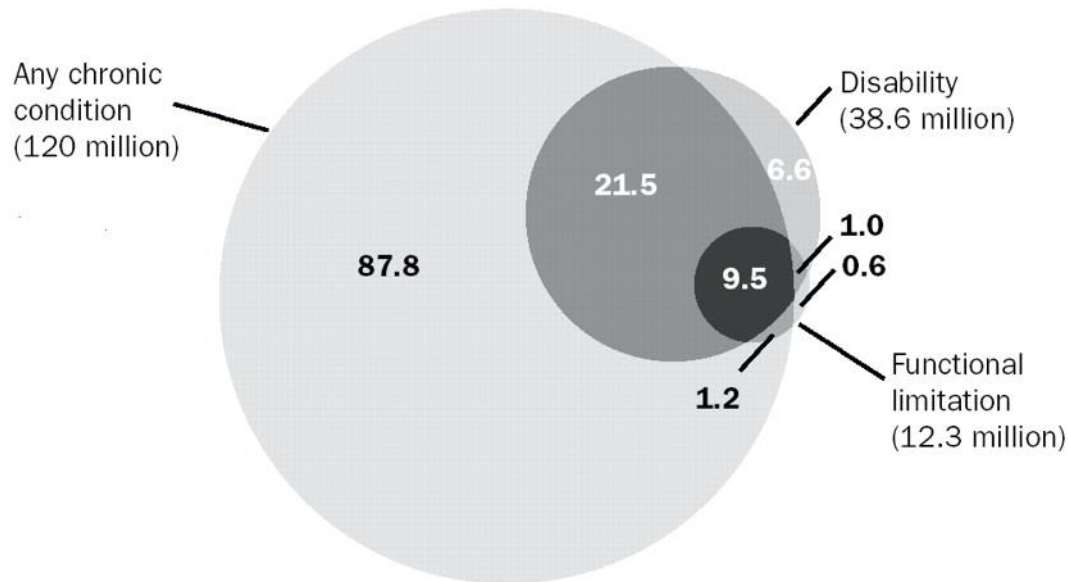


High Cost People – Who Are They?

- Considerable analysis by:
 - demographic characteristics
 - by medical condition
 - Diabetes, asthma, frailty, etc.
 - number of chronic conditions
 - 2/3rd of Medicare spending by beneficiaries with 5+ chronic conditions
 - functional limitations
 - ADLS or IADLs, how many, level of impairment
 - level of disability
 - How define – SSA, workers compensation, etc.



Overlap Of Chronic Conditions, Disability, And Functional Limitation Among Noninstitutionalized Americans, 1996.



SOURCE: Medical Expenditure Panel Survey, 1996.

NOTE: Amounts in millions.

Source: Gerard Anderson and James R. Knickman. Changing the Chronic Care System To Meet People's Needs. Health Affairs, 2001;20:146-160



EXHIBIT 2

Implications Of Having A Chronic Condition, Disability, Or Functional Limitation, 1996

	Number of noninstitutionalized Americans (millions)	Total direct and indirect costs	Percent hospitalized	Mean number of physician visits	Mean number of home care visits	Mean number of prescription drugs	Percent 200% of poverty or below	Percent working or going to school
None of the three problems	141.0	\$ 1,102	3.4%	1.7	0.0	2.2	34.5%	81.2%
Chronic condition	87.8	4,107	7.6	4.6	0.3	11.0	27.4	74.7
Disability	6.6	2,519	8.4	3.3	0.5	3.8	47.6	54.7
Chronic condition and disability	21.5	8,512	17.0	8.3	2.1	23.5	41.7	39.7
Functional limitation	0.5	3,172	15.7	4.0	10.0	5.8	42.9	37.6
Chronic condition and functional limitation	1.2	8,917	34.4	7.9	10.9	22.2	60.7	35.0
Disability and functional limitation	1.0	20,202	20.0	6.4	12.3	10.1	65.1	26.1
All three	9.5	17,361	32.9	9.6	47.8	33.5	56.5	12.1

SOURCE: Medical Expenditure Panel Survey, 1996.



High Cost People

- Practical applications
 - Risk adjustment methods predict who will be high cost in coming year
 - Used by programs like Medicare to pay HMOs
 - Targeting – who gets special attention



High Need People

- Much less well studied
- Not all high need people are necessarily high cost
- Not all high cost people are necessarily high need
 - May depend on time frame



High Need People

- We had many internal discussions
- What are the attributes that cause someone to become high need?
 - Severity of condition or functional limitation
 - Are certain individual conditions so severe that they automatically are high need
 - ESRD
 - Can you reliably quantify severity?
 - Multiple chronic conditions
 - What is the minimum number of conditions that qualifies?
 - What constitutes a unique chronic condition?
 - Functional limitations - ADLs and IADLs
 - Does one IADL make you high need?
 - Disabilities -
 - What is the appropriate definition of disability?
 - Is it related to work?
 - Behavioral/mental illnesses
 - Simply another chronic condition or modifier of other chronic conditions or both
 - Social needs



Our Approach To Defining High Need

- One category – yes or no
 - Focus on conditions that are permanent
 - 3 or more chronic conditions
 - Any functional limitation and/or disability
- Analyze separately those with and without behavioral/mental illnesses
- We recognize that many gradations are possible
 - We experimented with many



High Need – Functional Limitations (FL) or Disability and 3 or more chronic conditions (3 CCs) with and without behavioral health (BH)

How Do Populations Differ?

	% population over age 18	% population > 65	% 100% below Federal Poverty Level
All	100	100	100
No FLs <3CCs	46	24	46
No FLs >3CCs	49	59	43
Any FLs < 3CCs	1	2	1
Any FLs >3CCs	5	15	10

* Population is composed of respondents over the age of 18



What Are the Demographic Characteristics of High Need People? (percentages)

	All	High Need with BH	High Need no BH
Female	52	65	60
65+	17	45	61
White non Hispanic	68	73	70
Less than HS	16	30	28
College or more	29	15	16
Privately insured	56	14	16
Medicare or Medicaid	27	80	80
Uninsured	15	5	3



A Bad Combination

High Need/Low Income/High Spending

	All	High Need with BH	High Need no BH
Average health spending all incomes	\$4,581	\$20,584	\$22,173
Average income	\$27,497	\$5,855	\$8,573
Ratio health spending to income	17%	352%	259%



Richer People With High Need Spend More on Health Care

	All	High need with BH	High need no BH
Health spending by people < 100% federal poverty level	\$4,945.98	\$18,135	\$21,042
Health Spending by people > 400% federal poverty level	\$5,043.47	\$25,573	\$25,243
Ratio of spending between low and high income	0.98	0.71	0.83



High Need People Have Higher Utilization But Not Better Care Coordination

	All	High Need with BH	High Need no BH
Emergency room visits per 1000	182	651	565
% Receiving patient centered care	28	32	31
% Receiving shared decision making	61	58	54



What is missing from this analysis?

Amenability to Change

- Some people are high need and high cost but are getting appropriate care
- Changing the financing and/or the delivery system would not improve their outcomes or lower their spending
- What we really want to know are the characteristics of high need high cost people for whom delivery system or financing changes will improve their outcomes or lower their spending



Two potential targets for identifying high need/high cost people most amenable to change

- Behavioral characteristics
 - Some individuals are less likely to respond to suggestions to change their behavior or treatment
 - “Old and crotchety”
 - Behavioral health
- Clinical characteristics
 - Some diseases are more modifiable
 - Some combinations of diseases and functional limitations are more modifiable
- Likely there is significant interaction between the two



Sweet Spot

