



**Burden of Chronic Conditions and their Risk Factors in
South Dakota
August 15th, 2013**

Outline



- Background
- Data Methods
- SD Data
- Multiple Chronic Conditions (MCC) in SD



Background

- The typical approach to Chronic Disease focuses on individual illnesses
- MCC increases the risk for :
 - Mortality
 - Functional limitation
 - Unnecessary hospitalizations
 - Conflicting information from physicians
 - High cost hospitalizations or ER visits
 - Greater risk of frailty and disability
- Approximately 1 in 4 Americans have MCC, including 1 in 15 children



Background



- Among Americans aged 65 years and older, as many as three out of four persons have MCC
- Approximately 66 % of total health care spending is associated with care
- MCC pose a significant and increasing burden on the health of Americans
 - MCC include physical and mental disorders



Background



- In 2012 Center for Medicaid and Medicare released their Chartbook on Multiple Chronic Conditions
- List of 15 Chronic Conditions :
 - High BP, High Cholesterol, Ischemic HD, Arthritis, Diabetes, Heart Failure, Chronic Kidney Disease, Depression, COPD, Alzheimer's, Atrial Fibrillation, Cancer, Osteoporosis, Asthma, Stroke
- Nationally, 67.3% had 2 or more Chronic Conditions
 - And 14% had 6 or more
- In SD, 59% had 2 or more CC
 - And 9.5% had 6 or more



Methods



- Standardized definition of Chronic illness: “conditions that last a year or more and require ongoing medical attention and/or limit activities of daily living”
- From this paper also came a list of 20 chronic conditions
- **Goal:** Apply similar framework used in CMS Chartbook and guidelines of Goodman et al to examine MCC in the adult population of SD



Methods



Available	Not Available
Arthritis	Autism Spectrum Disorder
Asthma	Dementia
High Blood Pressure	Hepatitis
Heart Disease	HIV
High Cholesterol	Osteoporosis
Stroke	Schizophrenia
Cancer (other than skin)	Substance abuse disorders
Kidney Disease	Cardiac arrhythmias
COPD	Congestive Heart Failure
Depression	
Diabetes	

- Apply this framework to a broader population using Behavioral Risk Factor Surveillance System (BRFSS)
- BRFSS is a random national telephone survey



Chronic Disease in our State, 2011



	Prevalence	Affected Population
Asthma	6.9%	43,000
Arthritis	23.3%	145,000
Cancer	7.1%	44,000
Chronic Kidney Disease	2.0%	12,000
COPD	5.5%	34,000
Depression	16.4%	102,000
Diabetes	9.5%	59,000
Heart Disease	4.3%	27,000
High Blood Pressure	31.0%	193,000
High Cholesterol	36.6%	227,000
Stroke	2.6%	16,000

Top 3:

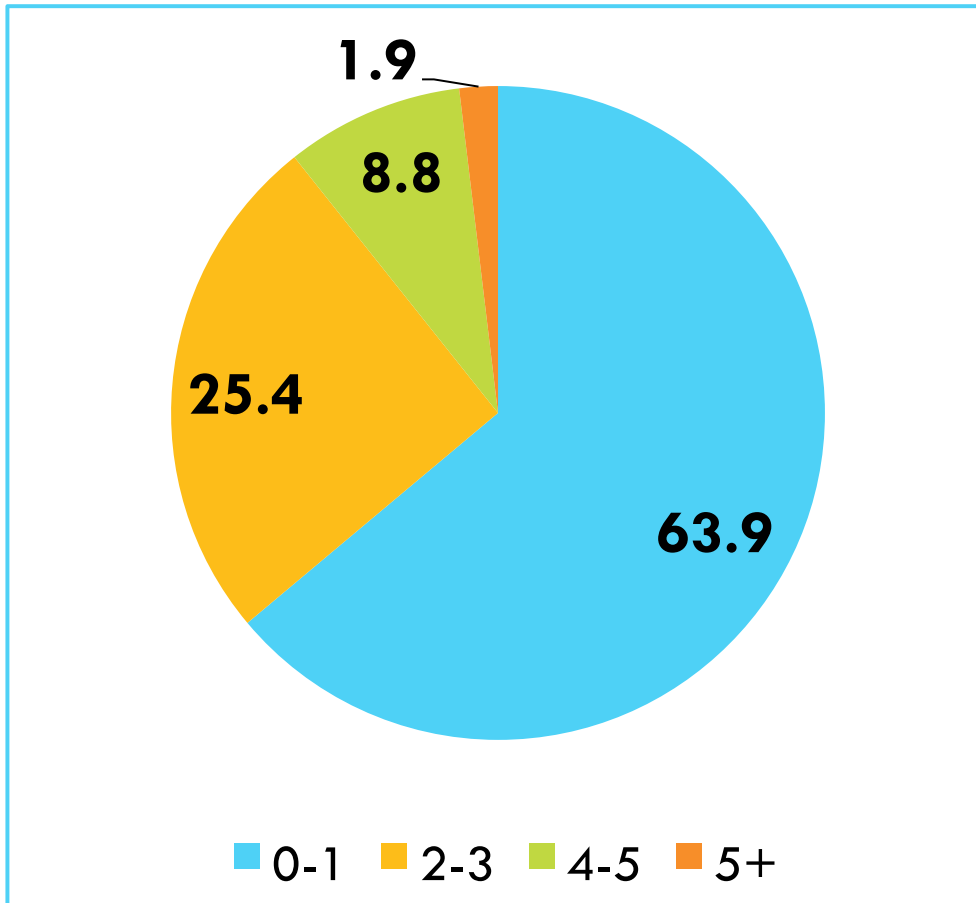
1. High Cholesterol
2. High Blood Pressure
3. Arthritis

Chronic Disease and Risk Factors



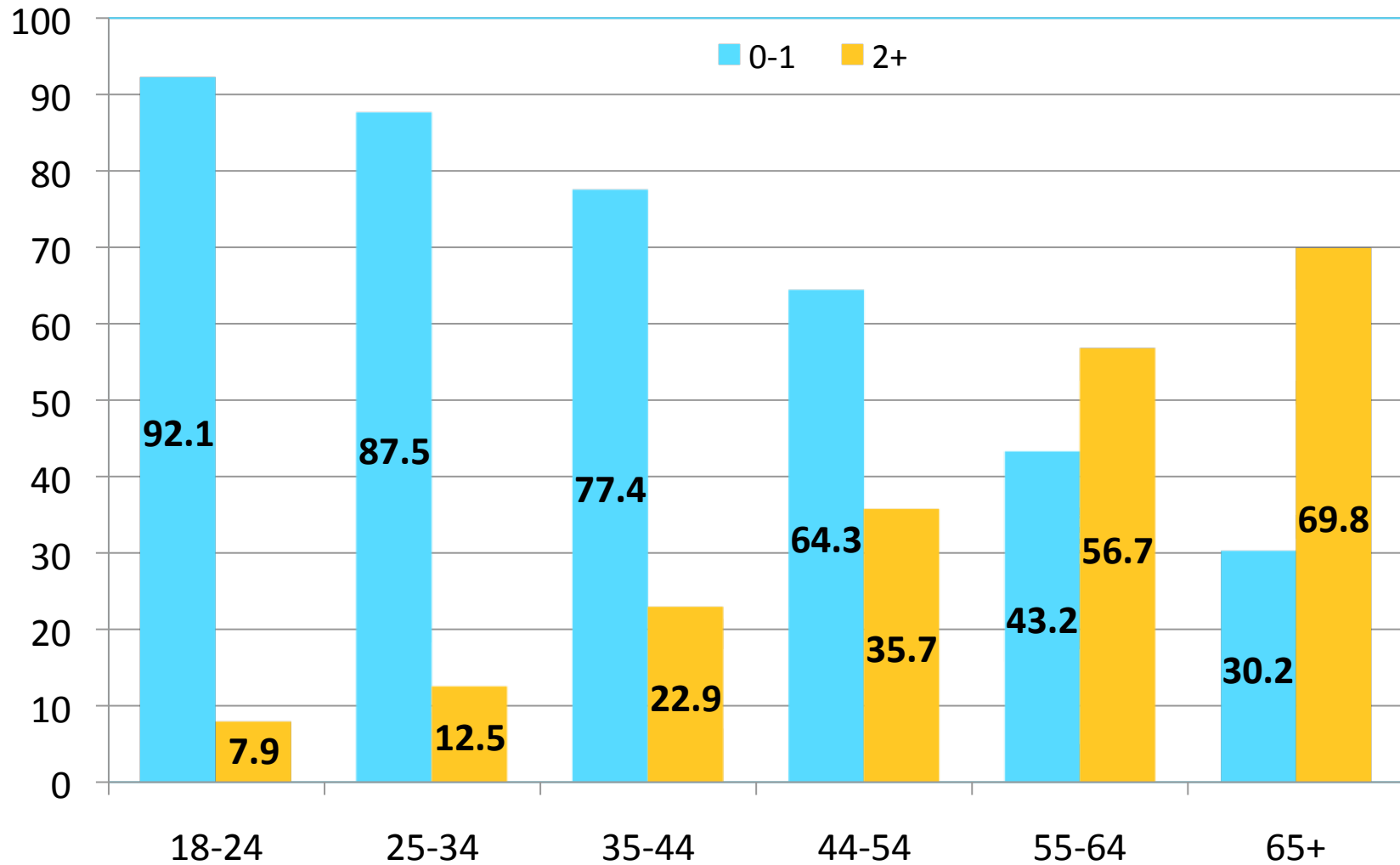
	% Inactive	% Smoking	% Obese
Asthma	28.5	22.4	40.0
Arthritis	37.2	22.8	36.2
Cancer	40.7	21.7	26.9
Chronic Kidney Disease	40.1	17.2	44.1
COPD	43.7	40.3	35.9
Depression	33.9	35.6	36.1
Diabetes	37.3	20.8	53.4
Heart Disease	43.7	15.1	38.4
High Blood Pressure	35.2	19.5	41.9
High Cholesterol	32.5	19.3	37.5
Stroke	42.2	20	29.9

Prevalence of MCC



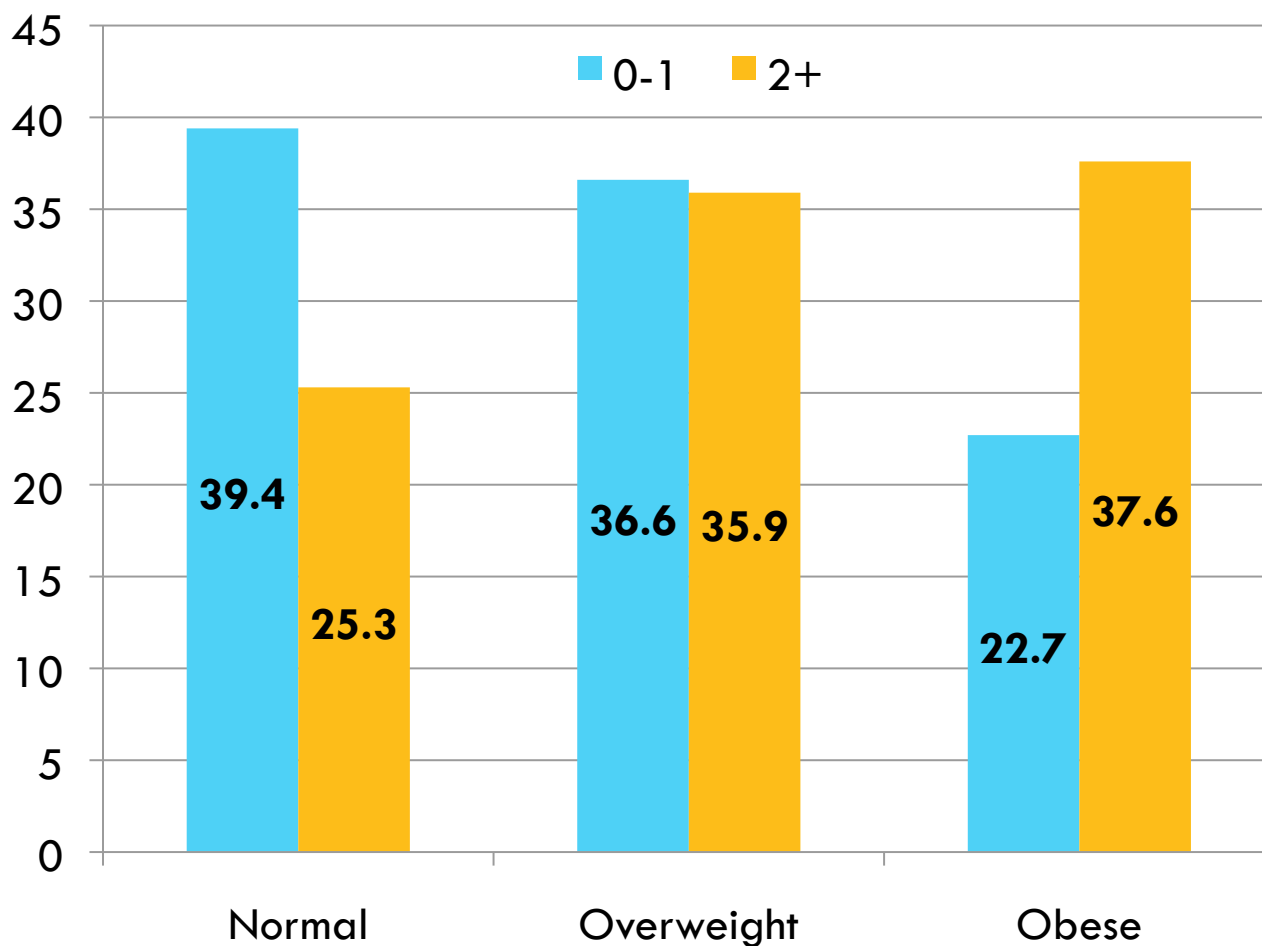
- 39% have no Chronic conditions
- Approximately 157,000 SD 18+ have 2-3 Chronic Conditions
- 56,000 have 4-5
- 16,000 have 5 or more

Prevalence of MCC by Age



	0-1 Chronic Conditions	2 or more Chronic Conditions
Gender		
Male	66.6%	33.4%
Female	61.3%	38.7%
Race		
White	63.6%	36.4%
American Indian	66.1%	33.9%
Education		
Less than HS	55.7%	44.3%
High School	60.2%	39.8%
Some College	65.4%	34.6%
College Grad	71.3%	28.7%
Insurance		
Yes	62.8%	37.2%
No	70.7%	29.3%
Income		
<15,000	52.1%	47.9%
15,000-<25,000	54.9%	45.1%
25,000-<35,000	62.2%	37.8%
35,000-<50,000	61.5%	38.5%
50,000+	72.4%	27.6%

Obesity



- Overall the prevalence of obesity in our population is 28%
- Of those with MCC the prevalence of overweight/obesity is 72%



	0-1 Chronic Conditions	2 or more Chronic Conditions
Aerobic Physical Activity		
Met Guidelines	48.3%	42.2%
Insufficient	27.5%	22.3%
No PA	24.2%	35.6%
General Health		
Good	94.3%	69.6%
Fair/Poor	5.7%	30.4%
Poor Physical Health Days		
At least 14 days	4.7%	18.0%
Average days	1.8	5.6
Poor Mental Health Days		
At least 14 days	7.1%	12.8%
Average days	2.5	3.9
Affect Usual Activities		
At least 14 days	2.2%	11.7%
Average days	2.2	6.4
Current Smoking	23%	22.8%

Dyad		Prevalence 18+ (Rank)	65+ Prevalence (Rank)
High Cholesterol	High Blood Pressure	43.3(1)	50.3(1)
Arthritis	High Blood Pressure	33.1(2)	44.9(2)
Arthritis	High Cholesterol	31.6(3)	38.2(3)
Diabetes	High Blood Pressure	18.4(4)	23.5(4)
Arthritis	Depression	17.1(5)	11.3(15)
Depression	High Blood Pressure	16.3(6)	12.3(10)
Depression	High Cholesterol	15.6(7)	11.9(13)
Diabetes	High Cholesterol	14.9(8)	17.8(5)
Diabetes	Arthritis	12.9(9)	16.8(6)
Cancer	High Blood Pressure	9.7(10)	16.1(7)
Cancer	High Cholesterol	8.4(14)	14.2(8)
Heart Disease	High Blood Pressure	9.1(11)	13.4(9)

Conclusions



- Those with MCC were more likely :
 - Female
 - Lower income
 - Less education
 - Insured
 - Less physically active
 - Experience a greater number of poor mental and physical health days



Questions



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References

- Health and Human Services Strategic Framework: http://www.hhs.gov/ash/initiatives/mcc/mcc_framework.pdf
- Goodman et al: http://www.cdc.gov/pcd/issues/2013/12_0239.htm
- Centers for Medicare and Medicaid Services. Chronic Conditions among Medicare Beneficiaries, Chartbook, 2012 Edition. Baltimore, MD. 2012.