Creating a Healthier Future: Investigating South Dakota’s Nutritional Guidelines Within Secondary Schools

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Introduction

Children are our future.

Regulation of nutrition in secondary schools is a significant topic in today’s society considering the rise in childhood obesity over the years. Nationwide, the number of obese children more than doubled from 1976 to 2008 (Twyla, 2013). In South Dakota specifically, 27% of school age children were considered obese in 2013 (Twyla, 2013). Obese adolescents are more likely to become obese adults, and are therefore more at risk for adult health problems such as heart disease, type-2 diabetes, stroke, cancer, and osteoarthritis. Healthy lifestyle habits, specifically healthy eating, can lower the risk of becoming obese and developing related diseases (Adolescent and School Health, 2014).

School environment continues to play a crucial role in the healthy eating behaviors and attitudes of today’s youth. Currently, 43 states have policies determining types of food schools may sell to students. However, these policies vary widely in content and strength (South Dakota Departments of Education and Health, 2015). As required by the Healthy, Hunger-Free Kids Act of 2010, the United States Department of Agriculture (USDA) has issued new “Smart Snacks in School” nutritional standards for competitive foods and beverages sold outside of the federal reimbursable school meals program during the school day (Adolescent and School Health, 2014). They are consistent, minimum nutrition standards that allow states to compare their policies to national standards. Currently, South Dakota does not have a statewide policy regulating nutrition in schools (Snack Foods and Beverages in South Dakota Schools, 2015).

This report examines the steps needed to rectify South Dakota’s lack of nutrition regulation. The report proposes the state of South Dakota create and mandate uniform nutritional standards to be followed by all schools throughout the state. The state will gradually implement these standards through various levels of wellness committees that incorporate the community. These committees will function independently and together in order to gain momentum in spreading the changes based on the needs of the schools, the communities, and the state overall.

The alarming rise in obesity rates in the country calls for an intervention. By targeting youth, the decrease/prevention of obesity and adult diseases are manageable outcomes that will likely decrease healthcare costs in the future. It is clear that South Dakota needs to take an active role in creating and mandating statewide nutritional standards within its schools.
Nature of the Problem - The Facts

Let’s take a closer look.

The Situation in South Dakota:

- The obesity rate among children ages 10-17 in South Dakota was 13.4% in 2011 and has remained stagnant since 2007.

(Source: The State of Obesity, 2015)
- Diabetes and hypertension cases in South Dakota have steadily increased since 1990, with projected cases continuing to increase with all health issues.

### Obesity-Related Health Issues

<table>
<thead>
<tr>
<th></th>
<th>Diabetes</th>
<th>Hypertension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current adult diabetes rate (2013)</td>
<td>9.1%</td>
<td>30.7%</td>
</tr>
<tr>
<td>Rank among states (2013)</td>
<td>36/51</td>
<td>32/51</td>
</tr>
<tr>
<td>Current diabetes cases (2010)</td>
<td>70,269</td>
<td>169,415</td>
</tr>
<tr>
<td>Projected cases of diabetes in 2030 at current pace</td>
<td>101,181</td>
<td>200,392</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heart Disease</th>
<th>Arthritis</th>
<th>Obesity-Related Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current heart disease cases (2010)</td>
<td>54,373</td>
<td>166,267</td>
</tr>
<tr>
<td>Projected cases of heart disease in 2030</td>
<td>222,609</td>
<td>130,568</td>
</tr>
</tbody>
</table>

(Source: The State of Obesity, 2015)
The Economic Factors:

- From 2009-2013, the average median household income across the United States was just over $53,000. In South Dakota the average median household income was just over $49,495 (United States Census Bureau, 2015).
- Other important economical factors to consider: While 49 out of 50 states in 2014 improved access to high-speed internet, South Dakota was ranked most improved with 65.6% of households having access. While most improved, household Internet access in South Dakota is still lower than the national average of 71.6% (Opportunity Index 2014).

The School Health Environment:

- In 2011, the Center for Disease Control (CDC) released School Health Profiles 2010: Characteristics of Health Programs Among Secondary Schools in Selected U.S. Sites. The health profiles provided data from 2002-2010 on the health of the school environment. The data discussed focuses on one element of the school environment: the availability of snack foods and beverages sold during the school day (Out of Balance, 2012).
- The availability of healthy snack foods in secondary schools varies from state to state. Most children live in states where less healthy choices are readily available and healthy snacks are limited. Progress towards reducing the availability of less-healthy snacks has stalled (Out of Balance, 2012).
- South Dakota’s rankings, in particular, make the lack of a state policy very evident. The state ranked 42nd and 48th in allowing students to purchase fruits and vegetables, respectively. The state ranked 38th in availability of soda pop/fruit juice. The state has been decreasing the availability of unhealthy snacks over the years but no drastic changes can be seen, especially in recent years (Out of Balance, 2012).

The Cultural Factors:

- More than one-half of youths in the United States eat one of their three major meals in school, and 1 in 10 children and adolescents eats two of three main meals in school (Dwyer, 1995).
- Since children are not “economic agents” who make the primary decision on the purchase of foods, the possible relevance of policy intervention is greater than for adults (Belot, 2009).
The Political Factors:

- South Dakota is only involved in two of the five public policies related to obesity.

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**Public Policy Related to Obesity**

<table>
<thead>
<tr>
<th>Policy Category</th>
<th>U.S.</th>
<th>South Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foods and Beverages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritional Standards for Competitive Foods in Schools</td>
<td>38 + D.C.</td>
<td>✗</td>
</tr>
<tr>
<td>The <strong>Healthy, Hunger-Free Kids Act of 2010</strong> required USDA to release new national standards for competitive foods in schools. USDA defines competitive foods as any food or beverage served or sold at school that is not part of the USDA school meals program. The interim final rule for <strong>Smart Snacks in School</strong> was released in June 2013 and becomes effective during the 2014 to 2015 school year. States with standards that are stronger than the new national standards will be able to retain those standards. A report by the nonprofit, nonpartisan Bridging the Gap found that 38 states have competitive food standards, but none of the states’ laws fully met USDA’s standards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Limits on Competitive Foods In Schools               | 29 + D.C. | ✗            |
| Twenty-nine states and Washington, D.C. have laws that exceed current federal requirements for when and where competitive foods may be sold. More information about the specific laws in each state |

| Farm-to-School Programs                              | 50 + D.C. | ✓            |
| All 50 states and Washington, D.C. have farm-to-school programs but only 35 states and Washington, D.C. have established mandatory programs. Farm-to-school programs have shown results in improving students’ nutritional intake. |

| Menu Labeling Laws                                   | 4     | ✗            |
| Four states and some local communities require larger chain food establishments to provide nutrition content on menus. The **Affordable Care Act** includes a provision that will require certain chain restaurants and similar retail food establishments nationwide to list calorie content information for certain items on menus. The U.S. Food and Drug Administration is expected to issue final standards in 2013. Many leading health organizations, including the American Medical Association (AMA) and the American Heart Association, support menu labeling as an important health education tool to allow consumers to make informed choices. |

| Sugar-Sweetened Beverage Taxes                        | 34 + D.C. | ✓            |
| Thirty-four states and Washington, D.C., include soda among items for which they charge sales tax. A number of studies have shown that relative prices of foods and beverages can lead to changes in how much people consume them. |

(Source: The State of Obesity, 2015)
Policy Proposal-Solutions

It is a grand collaboration.

As previously stated, the policy proposal recommends that South Dakota create and mandate uniform nutritional standards to be followed by all schools throughout the state. These standards will be comparable with the USDA’s national standards regulating nutritional content within schools. With the implementation of government based programs, such as the National School Lunch Program (NSLP), School Breakfast Program (SBP), and the Farm to School program, secondary schools in South Dakota would have the tools to procure and serve healthy foods to students.

<table>
<thead>
<tr>
<th>Government Based Programs (USDA)</th>
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<tbody>
<tr>
<td><strong>Farm –to- School Program</strong></td>
</tr>
<tr>
<td>• program that connects schools to local farms</td>
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<tr>
<td>• serves healthy meals, provides education opportunities, and supports farmers</td>
</tr>
<tr>
<td>• has shown results in improving students’ nutritional intake (Source: Farm to School, 2015)</td>
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<tr>
<td><strong>National School Lunch Program</strong></td>
</tr>
<tr>
<td>• provides cash reimbursement and commodity foods for meals served in non-profit food services in elementary and secondary schools, and in residential child care institutions.</td>
</tr>
<tr>
<td>• over 4 million pounds of USDA donated products valued at over $2 million are distributed in SD schools annually</td>
</tr>
<tr>
<td>• additionally, over 720,000 pounds of fresh fruits and vegetables are distributed. (Source: Food Distribution Program, 2015)</td>
</tr>
<tr>
<td><strong>School Breakfast Program</strong></td>
</tr>
<tr>
<td>• provides cash reimbursement to schools for meals served, much the same as the School Lunch Program</td>
</tr>
<tr>
<td>• children eligible to receive a lunch at free or reduced price are also eligible to receive breakfast at the same rate (Source: Food Distribution Program, 2015)</td>
</tr>
</tbody>
</table>

The state will gradually implement these standards through various levels of wellness committees that incorporate the community. These committees will be comprised of national and state regulators, stakeholders, school administrators, PTA members, students, etc. These committees will function independently and together in order to gain momentum in spreading the changes based on the needs of the schools, the communities, and the state overall.

In order for this policy proposal to take on an all-inclusive role, the six elements of policy prevention have been incorporated. A detailed account of each element is provided below.
1. **Strengthening Individual Knowledge and Skills**
   Schools play a crucial role by establishing a safe and supportive environment, with policies and practices that support healthy behaviors. They also provide opportunities for students to learn about and practice healthy eating behaviors (Adolescent and School Health, 2014). Teacher involvement should be encouraged, as they have direct and ongoing interaction with students. As teachers are perceived by students to have expertise/authority, even brief comments can be beneficial if reinforced (Cohen & Swift, 1999). Teachers must engage with students, valuing their questions and opinions, which will in turn motivate them to seek out further knowledge on healthy habits (Healthy School Meals, Snacks, and Beverages, 2015). Students will play an active role in their nutrition through increased knowledge, healthier nutritional choices, and becoming better advocates for their own health.

2. **Promoting Community Education**
   It is the responsibility of school administration to disseminate information related to changes in school nutrition regulations, by educating parents and community organizations of the importance of the new healthy standards. By reaching out to various committees, like PTAs, school boards, and to parents directly, information regarding nutrition recommendations and healthy eating plans will rapidly disseminate to the public. This will foster a more health conscious culture throughout the school system.

3. **Educating Providers**
   Educating providers, such as the Board of Education and parents, is important to decrease the consumption of less nutritious foods in secondary schools for the following reasons. The Board of Education is responsible for controlling which foods and beverages are permitted for sale in schools. Educating providers on health and nutrition will bring the Board of Education up to date on current USDA guidelines. The Board of Education can then implement standards in their respective schools to comply with the USDA. Educating parents also plays a crucial role. Parents influence the choices their children make in school. By educating parents we can increase children’s consumption of healthy foods. The goal is to have providers increase availability and consumption of healthy foods through education.

4. **Fostering Coalitions and Networks**
   One of the main goals of the wellness committees is to foster cooperation and networking in order for a seamless adaptation of changes. For example, each school district will be able to dictate their respective needs and seek out options at the local level. Instead of providing a broad spectrum of resources, committees can address these more specific needs. Members of the local community will be able to easily communicate with members in leadership roles to have their concerns addressed. In this way communities are more supported, and various levels of power are linked.

5. **Changing Organizational Practices**
By examining the organizational practices that have been established to handle nutrition in secondary schools in South Dakota, an institution can assess whether those practices reinforce certain interpretations of nutrition in secondary school students over others, and whether they are consistent with the CDC prevention status report guidelines. Once current organizational practices are assessed, new programs, strategies or regulations can be implemented to effectively incorporate more nutritious food into secondary schools.

6. **Influencing Policy and Legislation**
Wellness committees serve as a local advocate and educator to the community on the implementation of healthier food choices into secondary schools. Wellness committees comprised of dedicated individuals with leader roles aid in the influence and enforcement of school wellness policies. According to the CDC funded report, “Controlling Junk Food and the Bottom Line”, committees and the dedicated individuals that they are comprised of are key elements to implementing and revising policies. The impact of wellness communities could cultivate an alliance within communities and throughout the state. On a grander scale, this would allow for more participation and compromise in creating changes that would follow the ideals of non-malfeasance and beneficence.

By incorporating each element, the policy has a stronger likelihood to succeed. Tackling the macro-system, as well as each micro-system, the resistance for change can be slowly broken in order to make way for positive outcomes.
Projected Outcomes

It’s all about results.

No policy is complete without an evaluation of its worth. The following outlines the policy based on the five evaluative criteria.

1. Relevance
   Statewide standards and wellness committees will improve the health environment of schools, contributing to a decrease in childhood/adult obesity. This policy would provide proper nutrition in secondary schools for the target population. This is consistent with the priorities of decreasing obesity and secondary chronic disease leading to better lifelong health and lifestyle choices.

2. Progress
   There are currently no policies in South Dakota that dictate the types of foods and beverages secondary schools provide to their students. With our policy in place, we project a decrease in obesity rates of secondary school children in the first year by at least 1% due to mandatory school participation. The 2015 CDC Report on the implementation of the Healthy Schools Program (HSP) in California schools demonstrated a conservative estimated decrease of 0.5% each year in overweight/obesity statistics for the first three years in participating schools (Madsen, 2015). With 100% participation, it is reasonable to predict a 1% or more decrease in the obesity statistics. This decrease in childhood obesity will, over time, reduce the incidence of adult obesity from the current 29.9% thereby lowering incidence of many chronic diseases (State of Obesity, 2015).

3. Efficiency
   Our policy aims for a decrease in expenditure on health care issues related to chronic disease and obesity. Schools would also benefit through increased academic performance and standardized testing scores, with less resources needed for remedial teaching. Studies have shown that students who eat breakfast and have an increased consumption of fruits and vegetables and lower caloric intake levels of fats have fewer sick days, fewer disruptive behaviors and better school performance (School Health Guidelines to Promote Healthy Eating and Physical Activity, 2011). Committees would provide for an organized means of monitoring policy changes. The committees’ worth in relation to expenditure is a concern, however funds can be allocated from state and national levels, grants, etc.

4. Effectiveness
   Creating statewide standards will provide a framework for local schools to create a healthier environment. The 2015 CDC report has deemed wellness committees an integral part of policy changes. This policy/intervention will directly achieve its objectives by enforcing a standard set of nutrition guidelines in all of the high schools in South Dakota improving the health of secondary school students. The students will
receive at least five meals a week with high nutritional value and low levels of fat/cholesterol and sugar contents leading to better health and lower obesity rates.

5. Impact

This policy will improve the health of secondary school students by improving eating habits leading to a decrease in co-morbidities, obesity, and malnutrition. Improved nutrition will also lead to greater academic performance expanding educational opportunities for the students after high school. With more education comes more socio-economic mobility, thus improving the socio-economic status of the public school students and the state as a whole. Wellness committees have the potential to cultivate alliances within communities and throughout the state. The CDC emphasized the importance of forming wellness communities as a standard practice for creating changes in nutritional standards in schools in the publication, “School Health Guidelines to Promote Healthy Eating and Physical Activity”. 
Adoption/Implementation Strategies

To make a policy last.....

In order for a policy to remain relevant and withstand the forces of resistance in a society, a framework of adoption and implementation strategies need to be in place. The following discusses these ventures in order to create a lasting effect. Again, the six elements of policy prevention have been incorporated within this specific area.

1. Strengthening Individual Knowledge and Skills
   Specific programs will include mandatory nutritional education, as research “strongly suggests nutrition education combined with a changed school food environment is more effective for improving adolescent diets than only changing food offerings,” (A Series of Systematic Reviews, 2013). Mandatory promotion of healthy eating by all fundraising activities, even those outside of school, provide a more consistent and healthy environment. Furthermore, implementing calorie counts on menus in cafeterias and vending machines in all schools will increase knowledge of food choices giving students the tools to make better nutritional decisions. There are risks involved with these changes, all options involve large amounts of time and money. This may result in reservations from taxpayers and communities, especially with the current focus on core curriculum and testing.

2. Promoting Community Education
   School Administrations will work closely with parents to ensure awareness of new health oriented food choices within schools for students. By reaching out to parents at committee meetings such as PTA and school board, as well as reaching out in writing in cafeteria menus, and school information packets, community awareness of these programs will expand. Parental involvement is necessary for the success of this program to ensure health-centered food choices extend to all areas of their lives. Within South Dakota over one third of adolescent students eat less than one serving of fruits and vegetables per day. By establishing a healthy eating alliance between schools and the community we aim to improve students overall eating habits (Alversion, 2015). Difficulties may arise from the dependence on parental involvement and their acceptance of the educational information provided. Changing behavior can be a slow process and may not be a priority in the family structure.

3. Educating Providers
   Local wellness committees will establish to educate and facilitate schools and their nutrition departments on the transition to the new standards and related structural changes/benefits of nutrition based on CDC’s recommendations. These committees will provide information on government-funded food programs and resources to access nutritious foods including local sources. Seminars will be held to educate all providers on the importance and implications of eating healthy foods and resisting non-nutritious foods as well as the latest news related to nutrition and health. Attendance to these
committees and seminars is mandated for schools and open to voluntary participation by other community members. This mandate would be enforced by withholding funding for programs deemed vitally important to parents and students like field trips and art programs while making these parents aware that the non-compliance of their child’s school is the cause. This approach would leverage parents’ influence to pressure schools to get involved. A challenge to using this method of enforcement is that schools may not have funds for the arts currently in place, so lack of field trips and art classes may not affect the some student populations. An argument could be made that decreasing students’ access to such vital enrichment is punishing the wrong population, and the overall wellbeing of students must be considered.

4. **Fostering Coalitions and Networks**
   In order to foster coalitions and networks between already existing non-governmental organizations (NGOs), governmental organizations, and school administrators, funding will be allocated toward a bi-annual conference. NGOs and governmental organizations will share resources, support, and educate school administrators on food options and nutrition education in order to implement them in South Dakota schools. At these conferences, dieticians and/or nutritionists can present current information on healthy eating and nutritional snacking options for students, as well as discuss ways to promote healthy eating options in school. Elected local government liaison will continue to connect with government organizations throughout the year, facilitating communication and guidance on management of nutrition in schools. Coalitions can make a difference, as can be seen by the National Alliance for Nutrition and Activity's (NANA) success in passing the Healthy, Hunger-Free Kids Act. Fostering coalitions gives South Dakota schools support in making meaningful change. Future considerations would need to address whether nutritional information changed enough to warrant a bi-annual conference and if online methods would work equally as well disseminating information. Despite the common interest in improving the wellness of students in South Dakota, lack of Coalition between NGOs among themselves and between NGOs with Governmental organization can be a big challenge in reaching the desired goals of the policy.

5. **Changing Organizational Practices**
   In 2012, the South Dakota Department of Education (SDDOE) acknowledged the school’s responsibility to help prevent obesity by developing a model wellness policy for their schools to meet the 2005 USDA Nutrition Standards. Only 27.9 % of the local school district organizations adopted these voluntary nutrition standards. Therefore, it is necessary that South Dakota establish policies mandating change in organizational practices of the schools so they can both procure and finance healthier meal options. These changes include uniformly adopting government food programs, such as the previously mentioned NSLP, SBP, and Farm to School program. By implementing these nutritional programs all secondary schools in South Dakota will possess tools to procure and serve healthy foods to their students, consisting mainly of fruits, vegetables, whole grains, non-fat or low fat milk products. Current government food programs are reimbursable, however political environments may change and money allocations may be switched in the future. While participation in these programs is advantageous, future
participation may become a burden if more financial burden is transferred to the state or local government.

6. **Influencing Policy and Legislation**
   Wellness committees comprised of individuals such as, nurses, school principals, school board members, doctors, representatives from the local health commission provide vital leadership roles. In order to foster the creation of such committees in South Dakota, a portion of the funds allocated to local schools should be dedicated to recruiting these members. Funds should also be allocated at the state and national levels in order to foster collaboration between the various levels. It may be difficult to divert funding from other sources as there are many competing needs at all levels, and recruitment expenses may not be considered a necessary expenditure. On the other hand, Lack of incentives for schools principles or lack of the interest for a change can be a challenge towards implementation of the participation in health promotion activities.
Measures for Future Evaluation

It’s not over ‘til it’s over.

The following is a narrative of how the policy will be maintained, and continue to be effective in the long run.

**Policy Component:** Regulation and Evaluation

**Goal:** School Districts will develop a plan for measuring implementations of the local district nutrition policy including designation of one or more persons responsible for ensuring that schools are addressing/adhering to policy.

**Rationale:** In order for policies to be successful, school districts must establish a plan for measuring implementation and sustaining efforts, including evaluation, feedback and documentation of evidence.

**Monitoring:** The superintendent or designee (of school district) shall ensure compliance with established state nutrition policies on his/her school district and is responsible to report to the state level. In each school, the principal shall ensure compliance and is to report the school’s compliance to the school district superintendent or designee. School food service staff members shall ensure compliance with nutrition policies within the school’s food service areas and shall report to the school principal.

**Policy review:** Districts shall identify a strategy to help review policy compliance, assess progress and determine areas in need of improvement.

**Implementation guidance evaluation:** Assess whether the nutrition policy was implemented as intended. Outcome based evaluations are also included such as results/impact of the nutrition policy. Student absenteeism, health status (as a school), short term and long term outcomes should be evaluated. Evaluating any outcomes as a result, intended and unintended.

**Anticipated outcome:** To achieve designated positions in the hierarchy of the school system to be responsible for the areas under which they serve. These individuals will evaluate and review the outcomes of varying districts and make changes as needed; ensuring the policy is working as intended. (*Connecticut State Department of Education, 2009*)
Conclusion

It’s over.

In order to ensure a healthy future, the nation needs to take action now. South Dakota needs to contribute and make school-based nutritional standards a priority. This report has provided the recommended framework needed to integrate nutritional standards, and promote a healthy environment within South Dakota’s secondary schools.

The proposed policy must be undertaken with a comprehensive outlook. The various levels of wellness committees allows for the empowerment of communities, and communication between levels of authority. The report has detailed the main objectives of:

- educating students about proper nutrition so that they are able to apply their knowledge and skills to make healthier food choices
- educating community members, such as parents and faculty, and fostering involvement in creating consistent healthy environments within schools
- educating providers, such as school administrators and boards in order to better fund and facilitate the new standards
- fostering coalitions and networks between the above mentioned groups for a seamless adaptation of changes
- changing organizational practices with various levels of committees that allow for more efficient monitoring of implementation
- forming committees that allow for more participation and compromise in creating changes, and ultimately influencing policy and legislation

It is only through social support that sustainable programs are created. By adopting these programs, South Dakota can ensure its schools are promoting a healthy environment in which the children can flourish. In time, a reduction in childhood obesity and chronic diseases will be accomplished.
References


