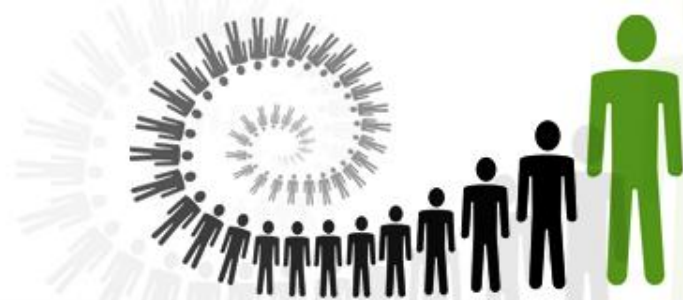


Diabetic Health and Mortality – Kalkaska Co.

Ferris State University

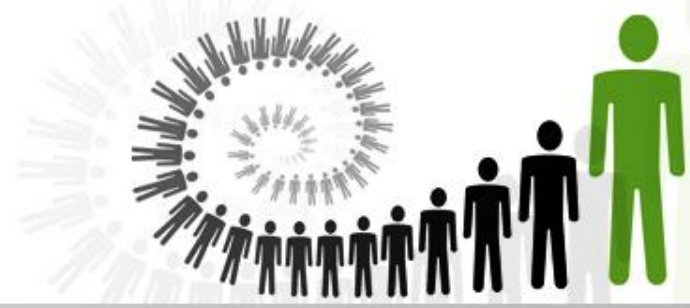
By: Pamela Dusseau, Elizabeth Junemann, Elizabeth Mitchell,
Tiffini Schnur, Tara Zander

ASSESSMENT



In 2012 and 2013, Kalkaska County ranked much higher than the benchmark in diabetic related mortalities per 100,000 individuals. In 2012, the benchmark for Michigan was 77.5 per 100,000, while Healthy People 2020's target was 65.8. Kalkaska County weighed in at 100.3 diabetes related deaths per 100,000 people (Kalkaska county health profile summary 2012).

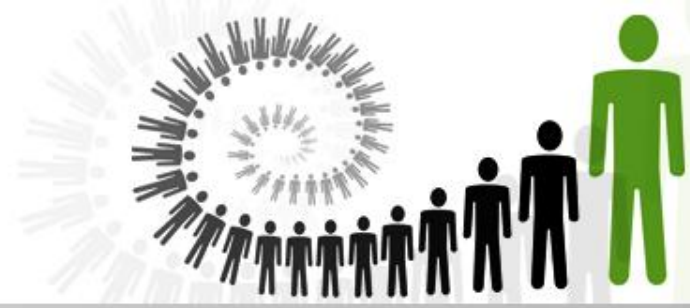
Assessment (Cont.)



2013 showed no improvement.

The benchmark was 76.9 per 100,000 for Michigan and Healthy People 2020's target remained at 65.8. Kankaska County almost doubled Healthy People 2020's target with 115.6 diabetes related mortality per 100,000 (Kankaska county health profile summary 2013).

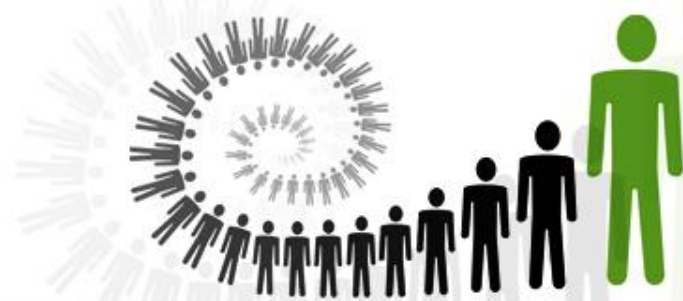
Assessment (Cont.)



- 39.8% of residents are overweight
- 29.5% are obese
- 16.2% live below the poverty level
- 9.4% unemployment rate
- 15.1% are uninsured
- 13.2% have no health care provider (p. 7).

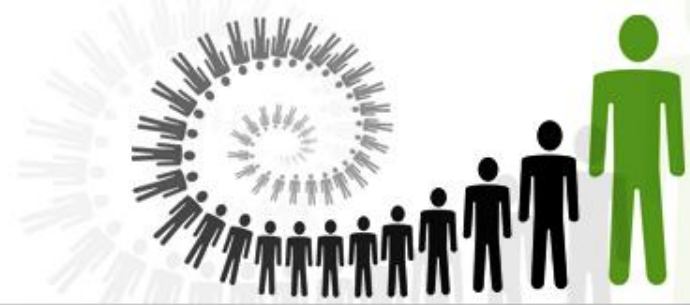
The risk factors within this population make them very vulnerable to developing diabetes and having difficulty managing their disease well.

Community Health Diagnosis



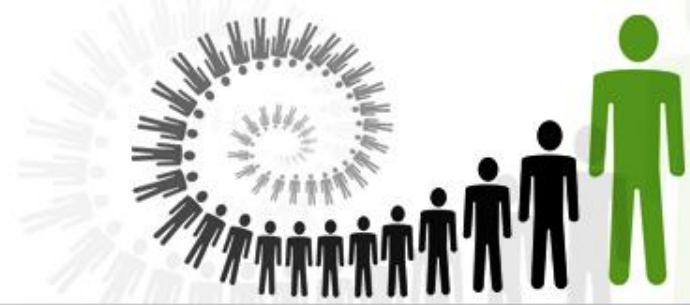
- Risk of **mortality related to diabetic illness**
- Among **adults in Kalkaska County Michigan**
- Related to high incidence of childhood and adult **obesity, poverty, poor nutrition, low education level, lack of insurance and insufficient exercise.**
- As demonstrated by **a diabetes rate of 15.4% with a diabetic mortality rate of 115.6 per 100,000.**

PLANNING



Comprehensive lifestyle interventions effectively decrease the incidence of type 2 diabetes in high-risk patients. In patients who already have type 2 diabetes, there is no evidence of reduced all-cause mortality and insufficient evidence to suggest benefit of cardiovascular and microvascular outcomes. Due to the challenges (and lack of success) in improving overall health outcomes in the adult population already diagnosed with diabetes, the target population chosen for this exercise is as follows:

Planning (Cont.)

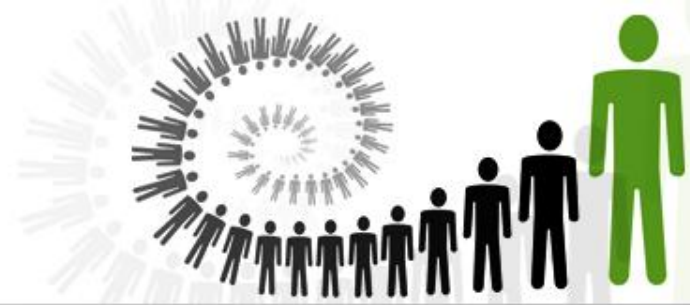


Target Group: Children ages 6-14

Primary and Secondary Prevention of Diabetes for this age group consists of education on diet, exercise, and diabetes (Mayer, 2010). Additional information will be provided to parents to encourage secondary support and to encourage familial lifestyle modifications

Program: Children screened for diabetes using guidelines from Peterson study. This youth would be targeted for intervention, but all youth would be invited to join in education and exercise. The 12 week program would consist of an afterschool program which begins with education on a topic (nutrition, reading nutrition labels, exercise, what is diabetes?) (Mayer, 2010). Approval for screening and participation will need to be secured by parents prior to acceptance into the program.

Planning (Cont.)

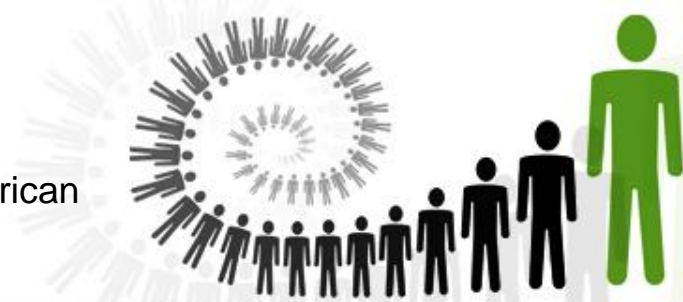


Goal:

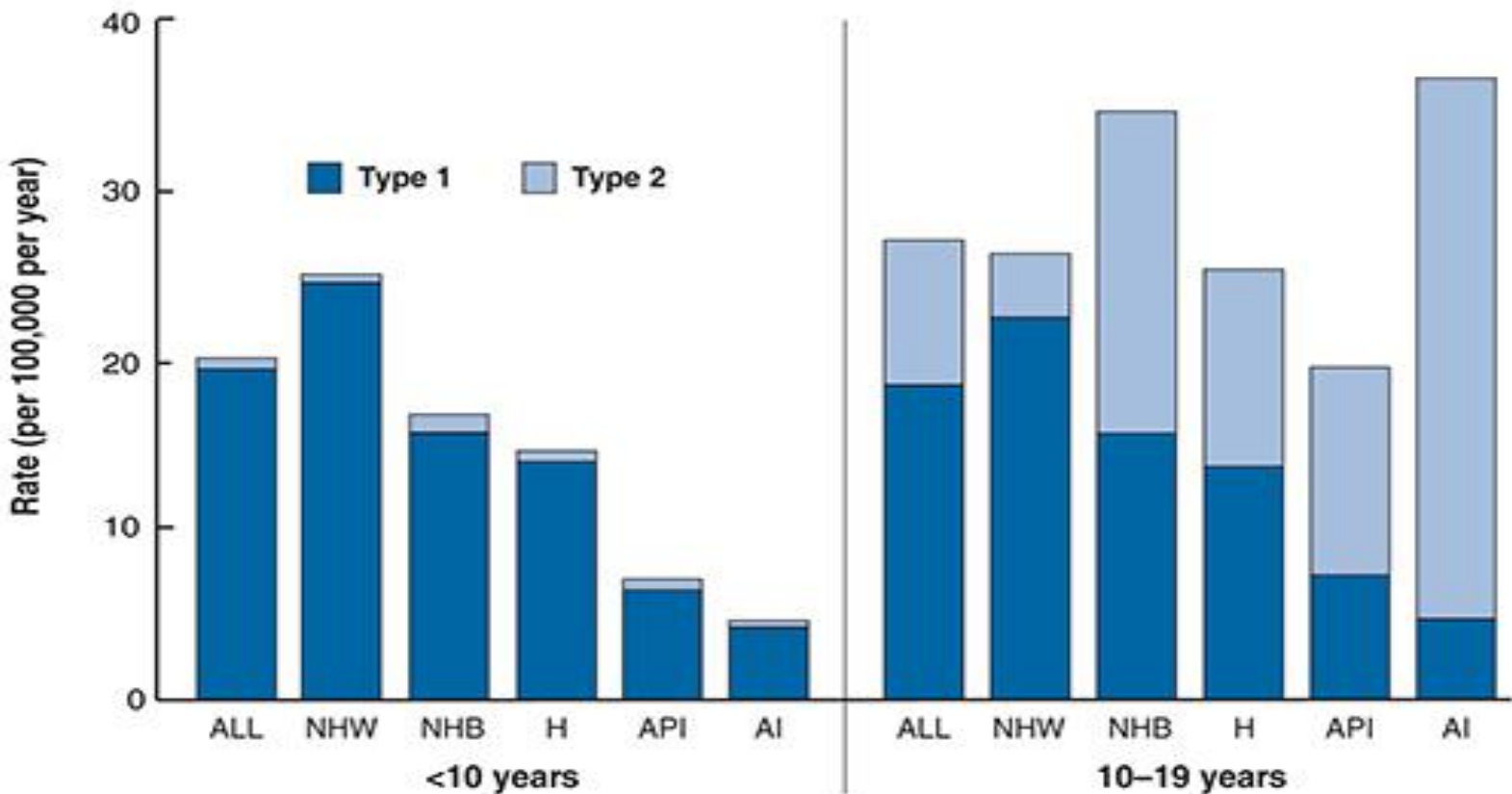
The goal of this program will be to see a reduction in risk factors in children ages 6-14 as evidenced by the ability to recognize and communicate healthy food choices (nutritional label info), lab work within normal values for this age group, completion of 12 week afterschool program and reduction in weight when appropriate.

Source: SEARCH for Diabetes in Youth Study

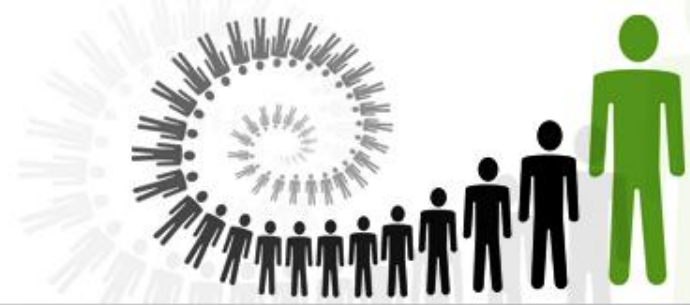
NHW=non-Hispanic whites; NHB=non-Hispanic blacks;
H=Hispanics/Latinos; API=Asian/Pacific Islander Americans; AI=American
Indians



Rate of new cases of type 1 and type 2 diabetes among youth ages younger than 20 years, by race/ethnicity, 2002–2005

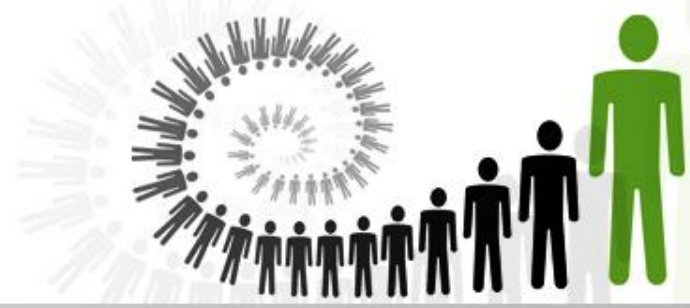


Implementation/Intervention



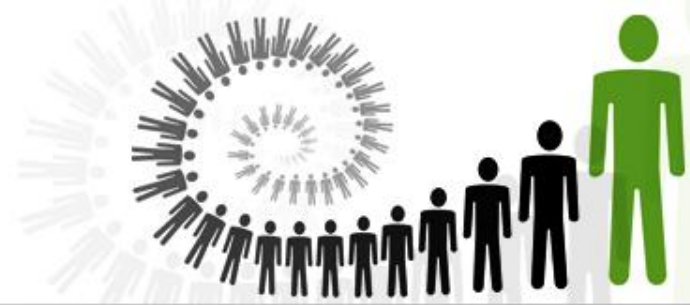
- Obtain parental consent.
- Partner with school nurse to identify most “at risk” students to include in program.
- Utilization of school nurse resources as well as nurse volunteers from within the community. Initial lab work to be drawn through the community hospital, Kalkaska Memorial Health Center.
- Contract with the local sports arena “**The Kaliseum**” to develop an exercise program applying the various areas within this facility such as the pool, weight room facilities and ice arena.

Implementation/Intervention (Cont.)



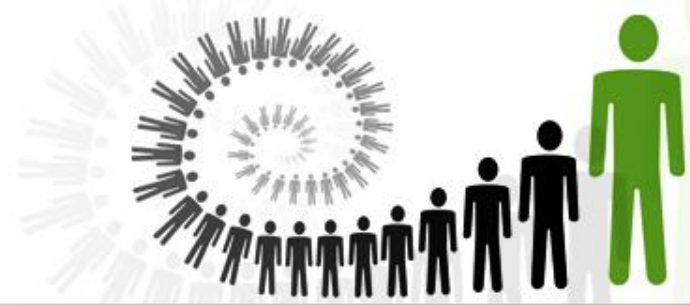
- Costs for the program to be covered through a grant from the General Mills Corporation which was specifically developed to target youth fitness programs.
- Active wear to be provided through a grant from “moms Team”.
- Review insurance coverage for children to cover expenses related to lab work when able.
- Provide transportation via school busing system to facility 3 days/week after school. Gas and employee expenses to be covered through grant.
- Develop educational materials for students/parents.

CHANGE MODELS



- Identifying appropriate change models will assist in targeting appropriate interventions to obtain the most successful results and compliance rates.
- Several models such as learning theories, behavioral change models, the self-empowerment model and the collective action model would be most appropriate for the age group of 6-14.

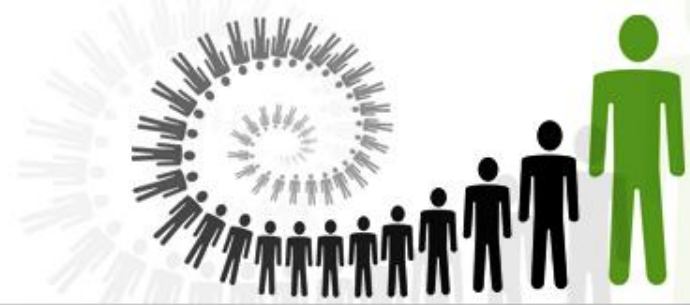
EVALUATION



Identifying effective outcomes for this program and its interventions can be evaluated by both long term and short term measures.

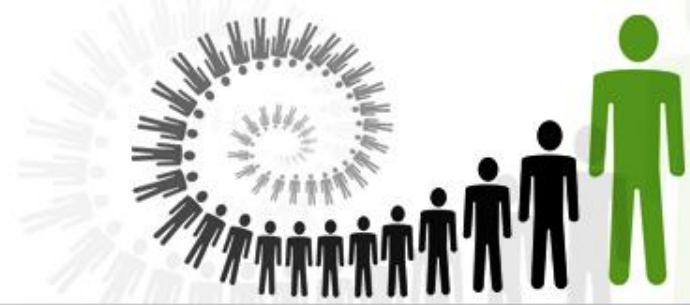
- **Short term evaluation:** Lab work within normal values for group participants, participation completion for all participants (or at least 80%), comprehension of nutritional impact as indicated by ability to verbalize and identify appropriate dietary intake, increased cardiovascular stamina as evidence by exercise log, documented weight loss, and sufficient funding.

Evaluation (Cont.)



- **Long term evaluation:** Childhood diabetes diagnosis rates will show a decline as evaluated by rates compiled in conjunction with the health department statistics. Kankaska County will see a reduction in adult diabetes related mortalities as evidenced by an ongoing reduction in death rates from 15.4% or below as determined by health department statistics from 2014 and beyond. Re-evaluate exercise regime of participants at 1 year intervals.

SMART GOALS



S – Diabetic related mortality rates will maintain or decrease from the current rate of 15.4%.

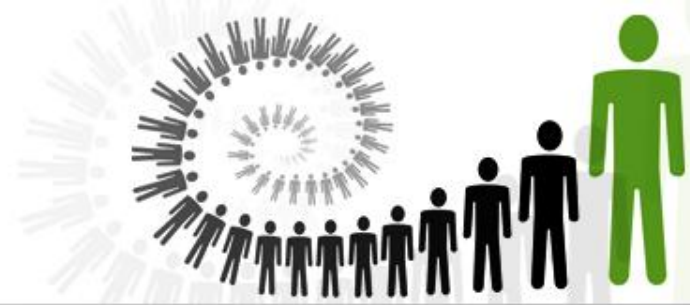
M – Measurement will be evaluated through data gathered through the Health Department #10 statistical analysis.

A – Yearly program participation will continue to demonstrate improvement in the health status of children ages 6-14 as evidence by a decline in childhood obesity rates for Kankaska Co.

R – Program to continue to receive funding through grants.

T – Reassessment to occur yearly at the beginning of each school year. (i.e. September 5.)

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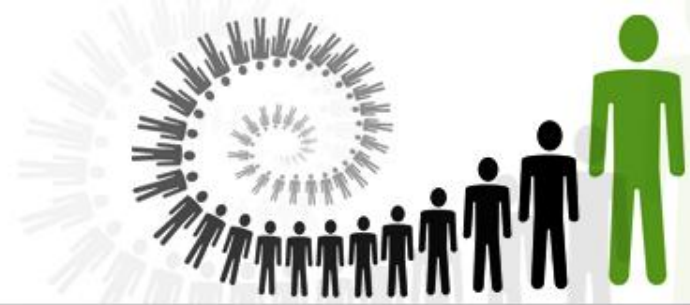
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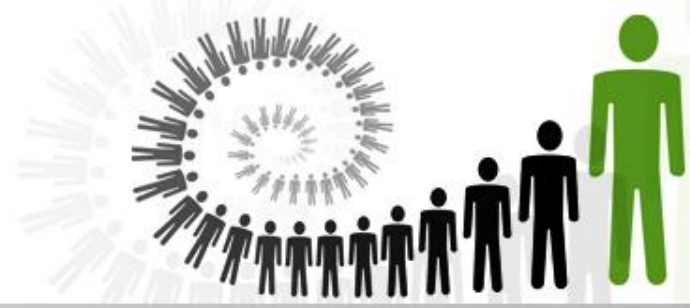
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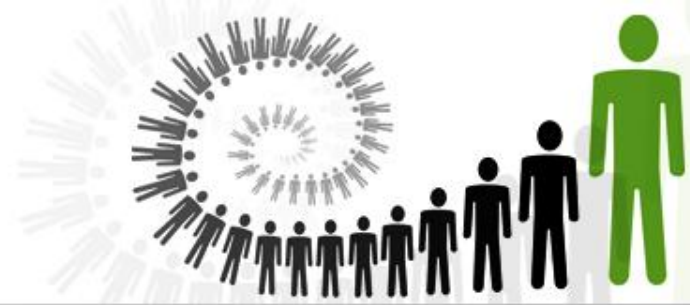


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Thank You