

A Quality Improvement Study on
Adolescent Immunization at a
Central Wisconsin Family Practice
Residency Clinic

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Context

- Adolescents tend to be behind on immunizations compared to younger children.
- More vaccinations are available for adolescents than have been before.
- Adolescents are typically healthy and do not present to the clinic unless ill.
 - Exceptions
- This is significant to primary care since vaccinations are key to preventative medicine.

Objectives

- Increase the number of adolescents in our clinic who are up-to-date on their vaccinations.
 - Increase parental awareness of current CDC vaccine recommendations.
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National Objectives

- Advisory Committee for Immunization Practices (ACIP) recommends:
 - Meningitis, Tdap, HPV for females (3 doses)
 - Catch- up vaccinations for MMR (2 doses), Hepatitis B (3 doses), Varicella (2 doses)
- Healthy People 2010
 - Greater than 90% coverage

National Outcomes

- National Immunization Survey—Teen, by CDC
 - From 2008 to 2009
 - Tdap 40.8% to 55.6%
 - Meningitis 41.8% to 53.6%
 - HPV
 - 1 dose 37.2% to 44.3%
 - 3 doses 17.9% to 26.7%

National Outcomes Cont...

- Ages 13-15, 90% coverage met for
 - Hepatitis B (3 doses)
 - Varicella (1 dose)
 - MMR (2 doses), 89.0%
- CDC conclusions
 - Coverage with routine adolescent vaccines is increasing
 - More effort is needed at state and national levels

Nation vs. Wisconsin

	Nation	Wisconsin
Tdap	76.2	72.3
Meningitis	53.6	55.7
HPV (at least 1 dose)	44.3	49.2
Hepatitis B (3 doses)	89.9	93.4
Varicella (at least 1 dose)	87.0	95.7
MMR (at least 2 doses)	89.1	91.8

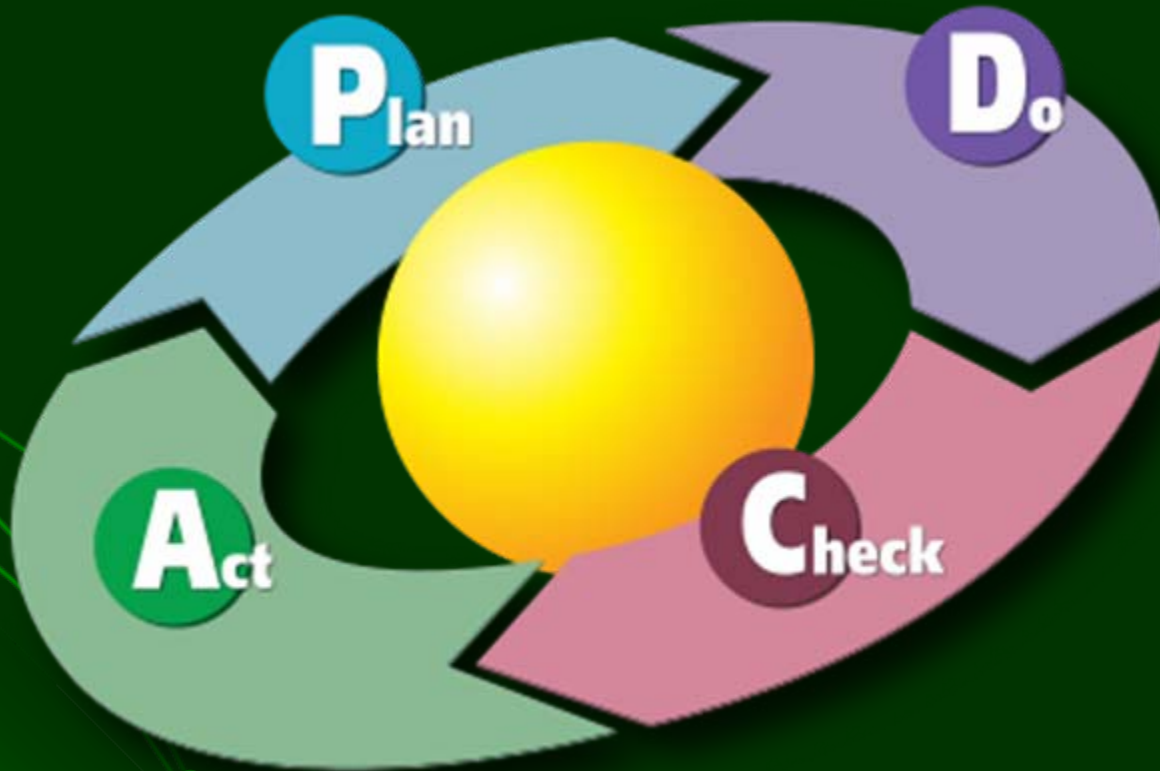
Adolescents age 13-17 years.

Notice last 3 vaccinations are typically needed before starting school.

From cdc.gov, Morbidity and Mortality Weekly report, August 20, 2010

Design

- Quality improvement study following the Plan-Do-Check-Act model.



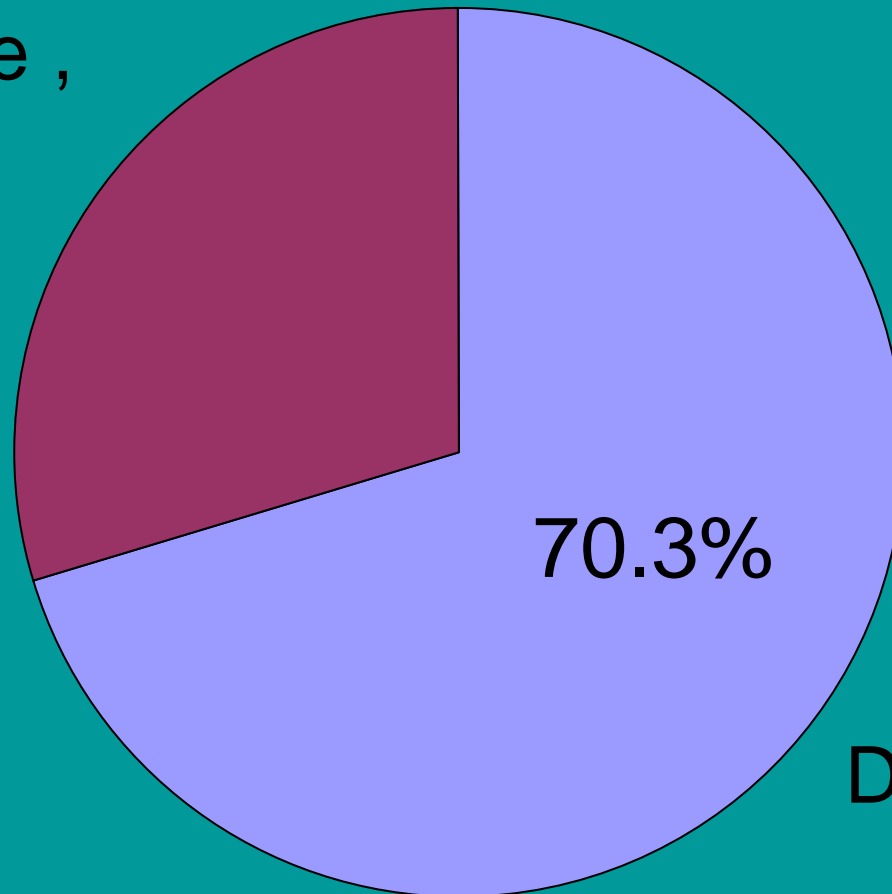
From http://en.wikipedia.org/wiki/Plan-Do-Study-Act_Cycle

Patients

- Current patients of UW Health – Wausau, age 12 to 19, who were in need of vaccinations, as of October 27, 2009.
- There were 424 adolescent patients at the time of the study
 - Included: Meningitis, HPV, Polio, MMR, Hepatitis B, Varicella, Tdap/Td-adult
 - Excluded: Influenza and Hepatitis A

of Adolescents in Need of Vaccination as of October 27, 2009

Up to date ,
126



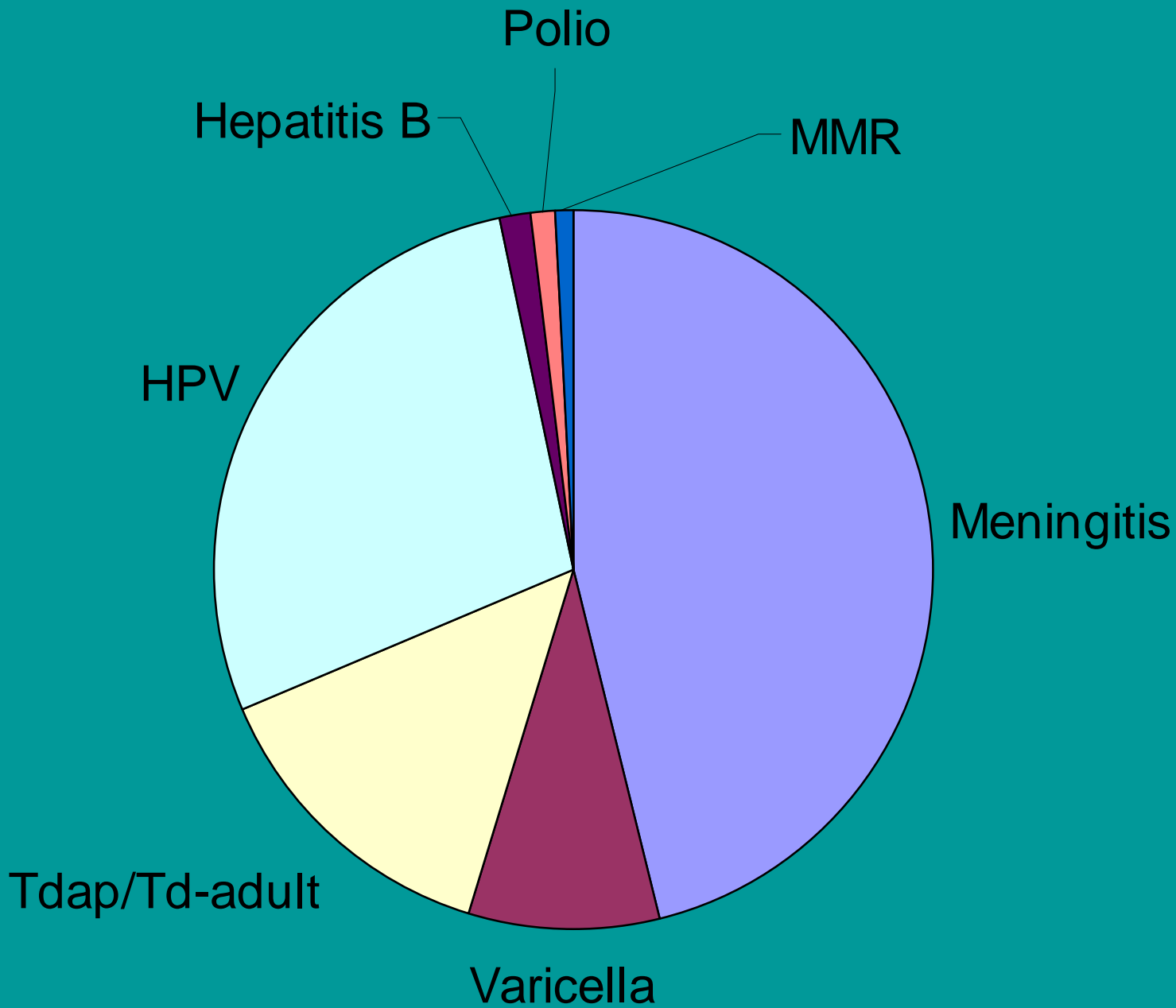
70.3%

Due, 298

Vaccinations Due as of October 27, 2009

- 537 vaccinations to 298 children

Meningitis	248	46%
Varicella	46	9%
Tdap/Td-adult	75	14%
HPV	150	28%
Hepatitis B	8	1%
Polio	5	1%
MMR	5	1%



Intervention

- A letter was sent to the parents of the 298 patients in need of vaccinations.
- Vaccination Information Sheets (VIS) from the CDC were included with the letter.
- Parents were encouraged to schedule a vaccination appointment, either:
 - during regular clinic hours, or
 - a specific evening we called an “Adolescent Immunization Clinic.”

Outcomes

- 44 - patients made appointments on Adolescent Immunization Clinic night.
 - 2 - no-showed
 - 33 - had gotten a letter
 - 7 - were sibs of adolescents with letters
- 4 - vaccinations declined
 - 2 HPV
 - Meningitis
 - Varicella

Outcomes, cont...

- 65 vaccinations given
 - 30 Meningitis
 - 6 HPV #1
 - 6 HPV #2
 - 4 HPV #3
 - 6 Tdap
 - 2 Varicella
 - 11 influenza, incidental

Outcomes, cont...

- Adolescents age 12-19 in our clinic in need of immunizations
 - Before the intervention
 - 298 of 424 adolescents
 - 70.3%
 - After the intervention
 - 227 of 348
 - 65.2%

Results

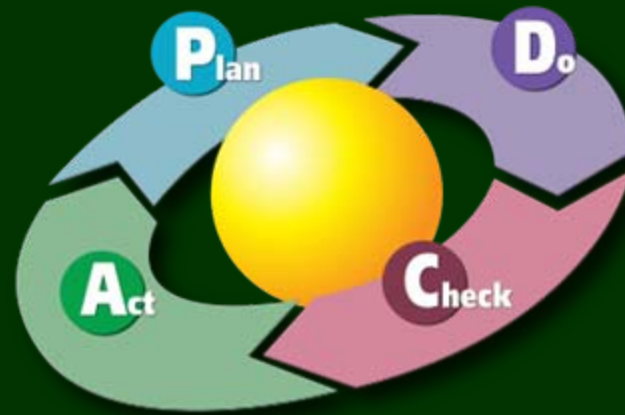
- 35 out of the 298 patients were vaccinated the night of the adolescent immunization clinic
 - An 11.7% success rate.
 - Average success rate of letter writing campaign is 10%
- Therefore, the intervention was a success!

Conclusions

- This study demonstrates a good response rate to a letter-writing campaign.
- However, many adolescents are still in need of vaccination in our clinic
- Another intervention was attempted, but failed.
 - Handing out WIR at Sports Physical Night
 - Not all patients belonged our clinic
 - WIR not given to all patients
 - Unknown if patient shared with parents.

Moving Forward

- Another resident will be taking this project over.
- Hopefully she can find an even more successful intervention for our clinic.
- The Plan-Do-Check-Act model will continue.



Special Thanks to:

- Helen Luce, DO
 - For her guidance.
- Vicki Binder, RN
 - For brainstorming the idea and helping with the follow-through.
- The lovely medical assistants who gave a total of 65 vaccinations in 3 hours.