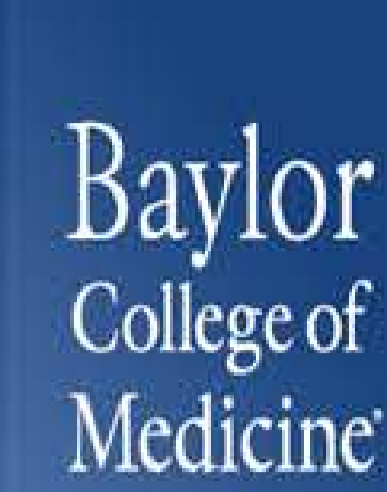


# Bleeding Phenotype And Provider Interventions For Menorrhagia In Post-Menarchal Adolescents With Congenital Bleeding Disorders When Compared To Adult Women – A Surveillance Report Of The Female Universal Data Collection Project In United States Hemophilia Treatment Centers

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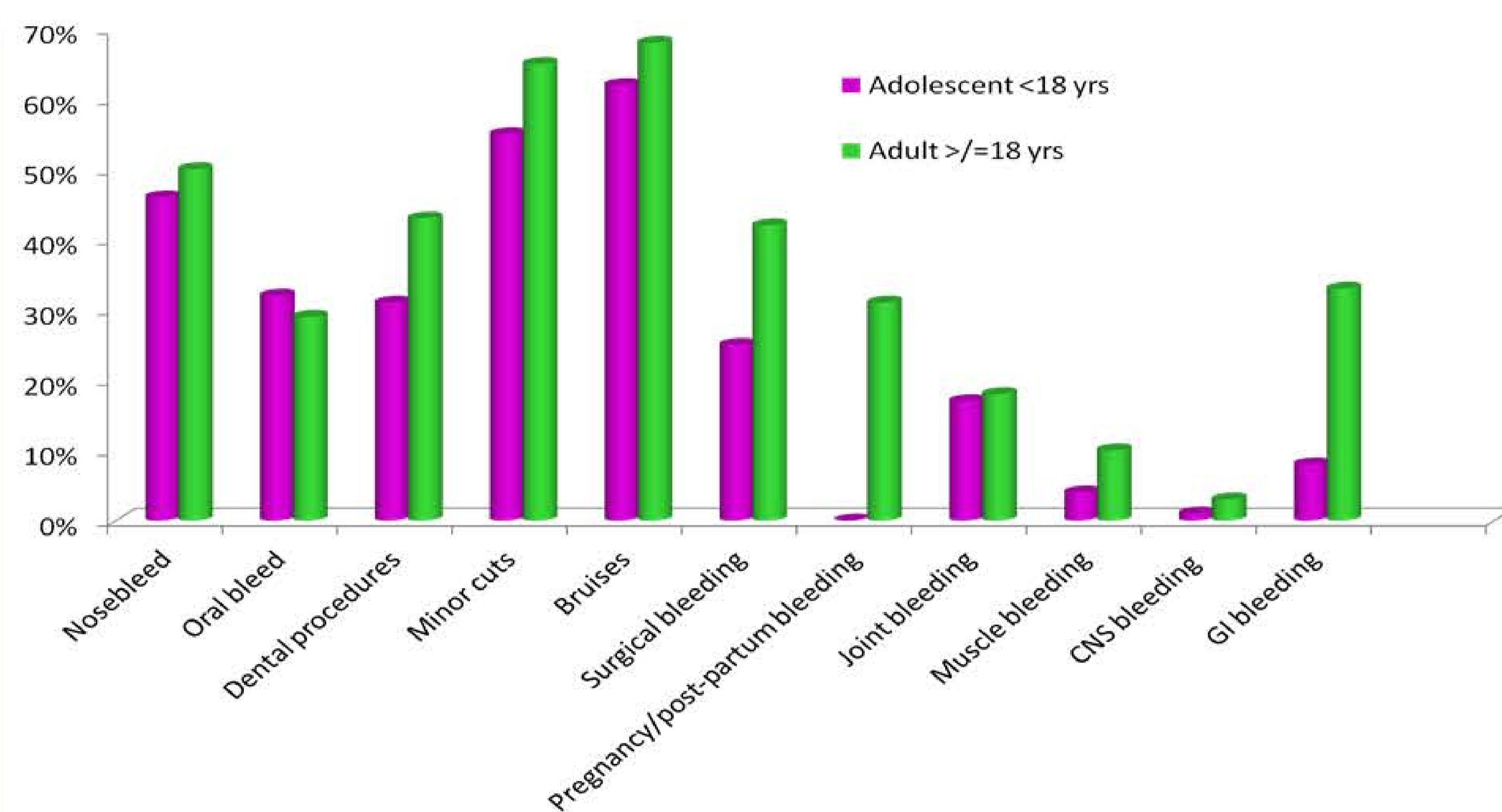
## Background

- Bleeding phenotype & provider interventions in adolescents with menorrhagia defined as heavy menstrual bleeding & congenital bleeding disorders (CBD) may be different when compared to adults, due to
  - younger age
  - lack of patient/provider awareness &
  - psychosocial issues causing delayed diagnosis.

## Results

- N = 274 post-menarchal women with CBD
- Adolescents N=79 Median age 16 yrs; range 11-17 yrs
- Adults N=195 Median age 28 yrs; range 18-82 yrs
- There was no difference in distribution of CBD diagnoses between both groups.
- Majority had single, few had multiple CBD.

## Results



## Results

## Objectives

- Study aim:
  - To compare & characterize bleeding phenotype & provider interventions including consultation, procedure &/or hospitalization & therapeutic interventions for menorrhagia in post-menarchal adolescent girls <18 years in comparison with adult women >= 18 years with CBD.

- Adults more often reported bleeding after surgery/dental procedures (p=0.020.09), pregnancy/postpartum (p<0.01) & gastrointestinal bleeding (p=0.01).
- On multivariate analysis, the latter two remained significant with AOR 21.2 (95% CI 2.7-164.8) & 4 (95% CI 0.8-20.3) respectively.
- No statistically significant difference was noted in the frequency of menorrhagia and other bleeding symptoms between the groups.
- Provider interventions were reported more often by adults for pregnancy/post-partum bleeding and post-surgical bleeding (p=0.05).

Fig.2. Bleeding phenotype in adolescents vs. adults

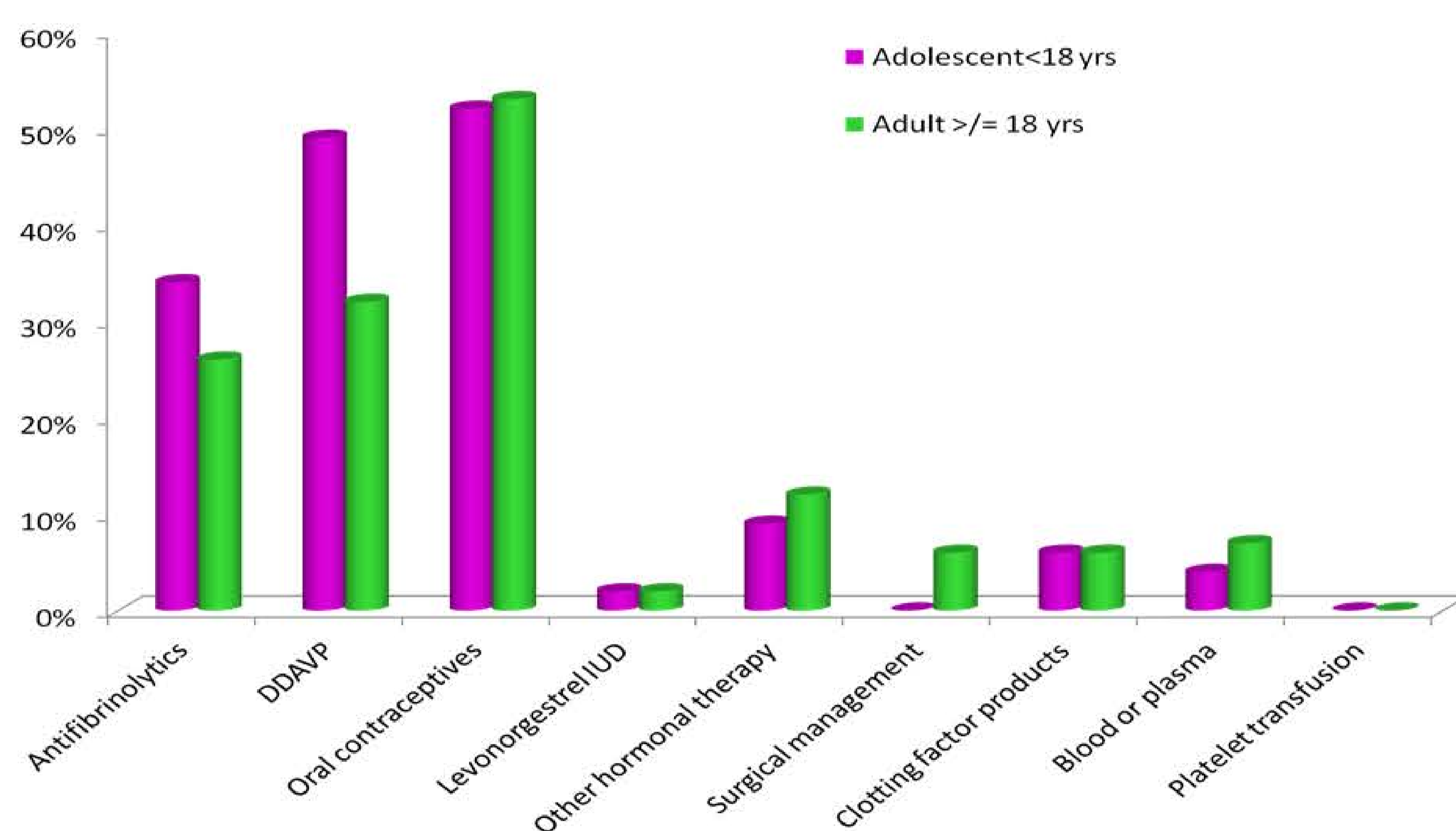


Fig.3. Menorrhagia management in adolescents vs. adults

## Design/Methods

- The study population consisted of post-menarchal (menarche self-reported) females with menorrhagia enrolled in the Female Universal Data Collection project in United States Hemophilia Treatment Centers.
- Patient demographics, bleeding disorder types, bleeding signs/symptoms, provider interventions & management details for menorrhagia were compared for both groups.
- Cross-sectional descriptive analyses (frequency distributions, summary statistics, multivariate analyses) were performed.

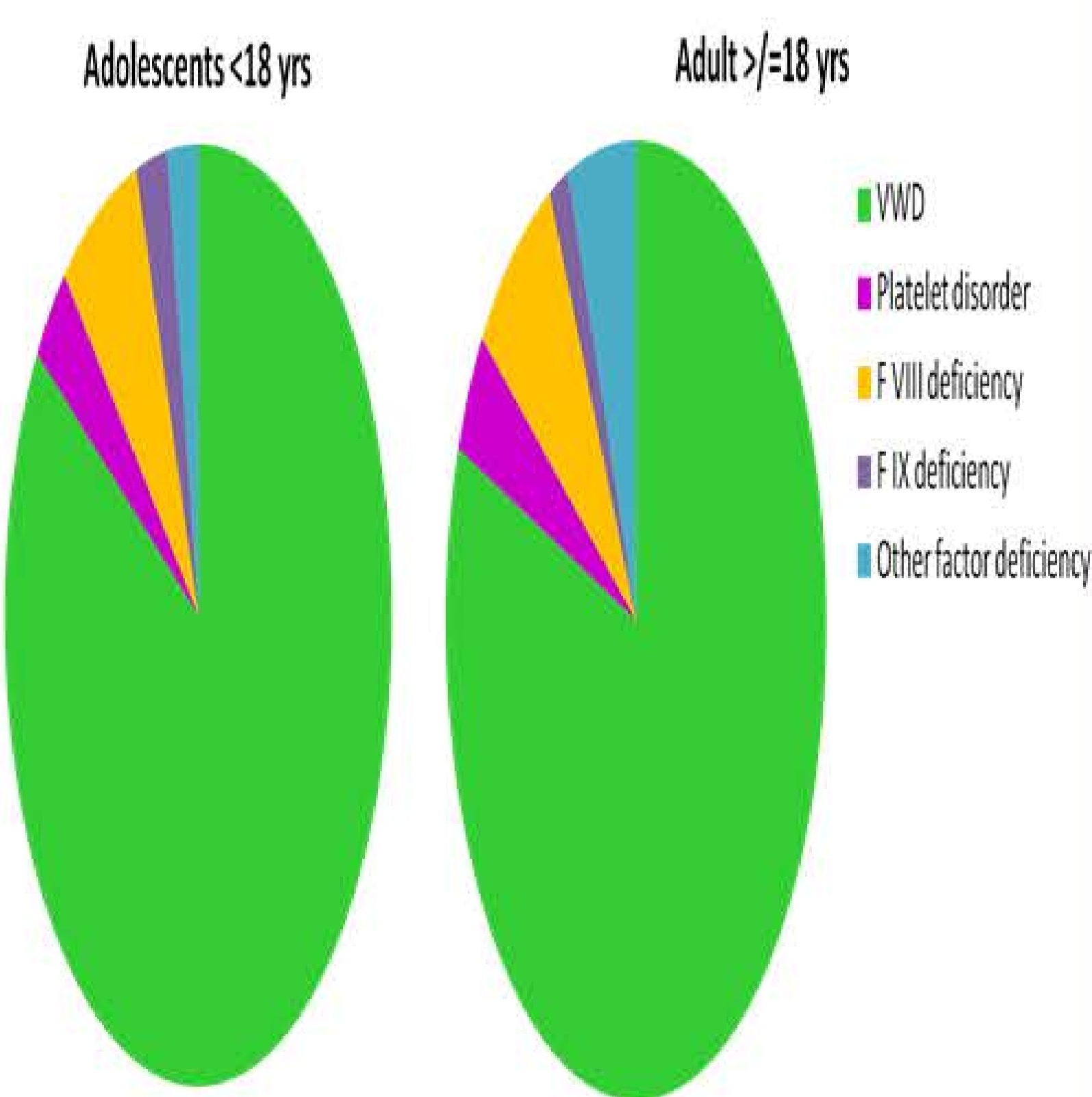


Fig.1. CBD distribution in adolescents vs. adults

- Desmopressin was used as menorrhagia therapy less often by adults (p=0.01). This remained significant on multivariate analysis; AOR 0.4 (95% CI 0.2-0.8).
- Hormonal therapy was used equally by both.
- Antifibrinolytics were used more often by adolescents, though not statistically significant (34% vs. 26%; p=0.19).
- Gynecologic surgeries/procedures for menorrhagia were performed more often in adults (p=0.004).
- No adolescent underwent hysterectomy, endometrial ablation or uterine artery embolization.
- Anemia was reported more often in adults than adolescents (59% vs. 44%; p=0.05).
- Iron therapy and packed red blood cell transfusions were similar in both groups.

## Conclusion

- Bleeding phenotype of post-menarchal adolescents & adults with CBD was different with higher proportion of adults reporting gastrointestinal and pregnancy/postpartum bleeding.
- Desmopressin was used more often in adolescents whereas surgical therapy for menorrhagia management was reported more often in adults.

## Future Directions

- Longitudinal studies are needed to determine whether improved patient/provider awareness, early diagnosis of CBD & timely management in adolescents may prevent bleeding complications at a later age.

Disclosure: The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

