Dear Module 6 student, UiO
Re teaching within PAEDIATRIC ALLERGY AND PULMONOLOGY

The Department of Paediatric allergy and pulmonology, Division of Paediatrics and Adolescent Medicine, Oslo University Hospital, receives patients referred from the local and regional area, with outpatient care at Ullevål and at Rikshospitalet, while acute infections are usually treated at Ullevål. *The Voksentoppen unit*, is a referral center for specialists and other paediatric departments in Norway, admitting children with chronic and/or complex allergic and pulmonary diseases. Patients usually has in-house day-care or are admitted for several days.

Your teaching within paediatric allergy and pulmonology in Module 6 consists of the

- **Asthma seminar,** focusing on understanding the burden of asthma, how to recognize and manage asthma in children, and how to answer parents' questions regarding advice on follow-up and prevention of asthma. *Important for the teaching at Voksentoppen*.

- **A lecture on Allergies in Children,** where we focus on understanding allergy develop in children and how to recognize, diagnose and manage allergies, with an emphasis on food allergies in the developing child. *Important for the teaching at Voksentoppen.*

- **A lecture on chronic lung disease in children**, providing an overview of chronic lung diseases in children, how to recognize, differential diagnosis and diagnostic and management considerations. *Important for the teaching at Voksentoppen.*

- **Small group teaching,** where all groups have one session at Voksentoppen, in addition to other small group teaching and clinical wards.

- **Inhalation seminar:** providing a practical approach to administer inhalation medication.

In the small group teaching at Voksentoppen, you should put your theoretical and practical skills at work. Our aim is to help you improve these skills. Thus, you should be prepared to *take a relevant medical history*, do *targeted clinical investigation* and *discuss relevant investigation and therapeutic options*. This leaflet outlines central topics in our clinical work that you should be familiar with.

The MEDICAL HISTORY is the FUNDAMENT of all investigations in paediatric allergy and pulmonology. You may give the patient/parents a few minutes to freely outline their problem, with subsequent guided interview by you, ensuring control questions. On the next page are questions you may want to keep in mind. *Practice your history taking skills with our patients!!*

CLINICAL EXAMINATION of a child with airway/pulmonary/allergic diseases includes assisted forced exhalation technique for auscultating peripheral airways.

You ***should be familiar with, and be prepared to discuss*** measurements and interpretation of common diagnostic investigations including

- forced flow-volume loops
- skin prick tests
- s-IgE measures
- chest X-rays

You may also want to have some knowledge on other investigations such as

- provocation testing (direct eg methacholine challenge and indirect such as exercise testing)
- exhaled fractional nitric oxide
- Reading a chest CT-scan, understanding other relevant imaging
- food challenges

Children **with airways disease** (often asthma) or **skin disease** (usually atopic dermatitis) will have been prescribed with treatment prior to referral to Voksentoppen.

1. *Why is the child referred?*
2. *Is the diagnosis clear?*
    a. Are further investigations needed for differential diagnosis?
    b. Are there "red flags" suggesting alternative diagnosis?
    c. Are symptoms periodic or persistent?
    d. How severe, and do they impede on the child's daily life?
    e. What are the common triggers, and can they be avoided?
3. *Does the treatment work?*
    a. What medications are prescribed (type, dose, frequency, duration, administration)?
    b. Do they take the medication? Correctly? Periodically or continuous?
    c. Has treatment improved the condition?
    d. Are there environmental or other factors that may aggravate the condition?
4. *How can management be improved?*
    a. Education?
    b. Changing administration form?
    c. Stepping up or adding medication?
    d. Other factors
5. *Does the child have one disease, or co-morbidities?*

Children with (possible/likely) **food allergy** (perceived or documented):

1. *Why does the child (or parents) think he/she is allergic to food?*
    a. What symptom(s) and how severe?
    b. Age first time?
    c. What is/are the likely food in question?
    d. Symptoms always or sometimes after exposure?
    e. Time from exposure to symptom appearance?
2. *Has clinical allergy or allergic sensitisation (you must know the difference) been documented?*
    a. Was the diagnosis based upon history and/or investigations?
    b. What test were used?
    c. What levels of allergic sensitization was documented?
        i. Wheal size for SPT or s-IgE?
        ii. Use of component resolved diagnosis?
        iii. Elimination-provocation trial?
    d. When were tests performed first and last time?
3. Has the child eaten the offending food?
    a. How much do they tolerate before symptoms appear?
    b. Changing clinical picture (exposure/symptoms) with increasing age?
4. Is a food challenge warranted?
    a. To diagnose/document food allergy and/or tolerance level?
    b. To assess tolerance development and re-introduction of food?
    c. Other?
5. How to manage and/or prevent food allergy
    a. Avoid exposure
    b. Recognize anaphylaxis
    c. Manage acute symptoms; do you know how to use adrenaline injectors?
    d. Potentially new treatments (oral immune therapy) in the future?

Responses to these questions should guide you to a ***prioritised differential diagnosis***, with subsequent ***investigations in prioritised sequence***, and suggest optimal *management* and *follow-up*.