444* Building a CF Center in Gaza – a bridge over troubled water

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The incidence of CF in Israel is 1:5000 births, similar for Jews and Arabs. If a similar ratio is assumed in the Palestinian population, regardless of consanguineous factors, a major discrepancy is observed. The actual number of Palestinian patients is much lower due to under-diagnosis and early death prior to diagnosis. Some children in the West Bank/Gaza have access to Israeli CF centers, but the majority are treated only by a few Palestinian physicians specialized in CF. To strengthen the local independent capacity, we recently trained a physician from Hebron who is now providing medical care for CF patients in the Red Crescent New Pediatric Hospital. The situation in Gaza is even worse due to recent political changes. As a result, CF patients in Gaza are not receiving basic medical care, and many patients go undiagnosed. Parents of children with CF in Gaza have made a special appeal to us to receive assistance. The CF Center at the Hadassah Medical Center in Jerusalem in partnership with the Peres Center for Peace, initiated a development program that incorporates comprehensive training for Palestinian pediatricians and auxiliary personnel as well as the setting up of an independent CF center in Gaza in partnership with a local NGO. This special training program was developed for medical professionals and includes 2 physicians, a nutritionist, a nurse and a physiotherapist from Gaza. The 2 physicians and the nutritionist have already started a 1-year training program and are about to be joined by the nurse and physiotherapist who will also undergo 3 months practical training. The structure of the program and the course of training will be presented.

445 Cost analysis of pharmaceutical treatment of adult patients with cystic fibrosis with regard to severity of lung-function impairment and nutritional status

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Background: While previous studies have indicated that specific health characteristics (such as severity of lung-function impairment) can have a major influence on medication costs, a quantification of these effects has as yet not been prepared for outpatient CF care.
Objective: The present study quantifies the monetary difference in pharmaceutical treatment costs for patients with CF between different severity levels of lung-function impairment as well as different categories of body mass index. Using statistical analysis, these new findings aim to increase transparency about utilization pattern and treatment costs with respect to the patient's health status.
Method: Based on primary data of daily drug intake for a representative CF population in the entire year 2007 ($n = 124$ adult patients attending the CF outpatient department in Frankfurt, Germany), the effects of lung-function impairment and BMI were assessed using SPSS for variance tests and ordinary least square-regression analysis.
Results: Annual medication costs of an adult patient with CF averaged € 17,219 (€ 22,158 including i.v. therapy). Considering FEV1 as a disease severity related parameter, average medication cost of patients with severe lung function impairment (FEV1 < 40%) were € 21,237, significantly higher ($p \leqslant 0.05$) than for patients with normal lung function (FEV1 ⩾ 90%), which averaged € 10,940. OLS-analysis further indicates an inverse relationship between annual medication costs and BMI ($r = 0.378$).
Outlook: Improved transparency around the impact of patient health on CF medication costs will help to perform cost-benefit assessment and ensure sustainable medical care for patients with this rare disease.

446 Financial savings following the introduction of a cystic fibrosis electronic patient record system

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Introduction: There is an agreement between the regional Cystic Fibrosis (CF) unit and the local Primary Care Trusts (PCTs) that high cost drugs such as dornase alfa, Tobi® and voriconazole which we prescribe via community prescriptions (FP10), can be cross charged to them. Previously we have found it difficult to match prescription to patients as data from the Prescription Pricing Authority (PPA) is anonymised. In 2007 we introduced an electronic patient record systems (EPR) with e prescribing. We report the impact this system has had on efficiency of cross charging and financial savings.
Method: Data was obtained for high cost drugs for the financial period 2007–2009. Drug costs were noted as was the post code of the community pharmacy where the item was issued. A search by postcode of which patients lived in the vicinity of the community pharmacy was performed. Patient's medical records or list of medication issued electronically via the medication record on EPR were obtained. Prescriptions were them matched to patients and total cost of the drug crossed charged to primary care. When there was negative match cross charging could not occur.
Results: In the financial year 2007/8 prior to EPR, £227, and 582 was cross charged to primary care (63% of the total spend). However in the 2008/9 post EPR, £273,137 was recouped (87% of the total spend).
Conclusion: The introduction of the electronic patient record has improved the ability to match outpatient prescriptions issued to patients for high cost drugs and increased cross charging to PCTs. This has had significant financial benefit for the Unit.

447 The increased healthcare economic burden associated with chronic infection with transmissible *Pseudomonas aeruginosa* strains in CF

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Although chronic infection with transmissible Pseudomonas aeruginosa (Psa) strains causes increased morbidity, and ultimately mortality in CF patients, the burden this places on the healthcare economy, of increasing importance in these times of financial austerity, has not been studied. To investigate this further, using logistic regression we matched (for age, sex, BMI, FEV1, and time since diagnosis) 47 adult CF patients chronically infected with the commonest UK transmissible Psa strain (the Liverpool Epidemic Strain, LES) with 47 infected with unique Psa strains and compared their healthcare costs (inpatient and outpatient care, antibiotic therapy, and regular prescriptions) over a 5 year period.
Fisher's exact test, Mann–Whitney's U test and the chi squared test with Yates correction were used to analyse the data.
The mean cost per patient per year was higher for LES patients for inpatient care (£13970 v £4553, $p < 0.0001$), outpatient attendances (£2635 v £1627, $p = 0.02$) and also home and hospital antibiotic therapy (£806 v £181, $p < 0.001$). Regular prescription costs were similar in both groups (£847 v £732, $p = 0.56$). Overall, the healthcare cost of caring for an adult CF patient with LES chronic infection was more than twice that for a matched patient with unique Psa strain infection.
CF patients chronically infected with LES place an additional burden on the healthcare economy than that associated with chronic Psa infection. This has implications for the financial modelling currently underway in the UK to adequately resource CF units, and also underlines the need to prevent infection with transmissible Psa strains by effective cross infection control strategies.