(100 µg/ml) or TNFα (10 ng/ml) -induced IL-6, IL-8 and RANTES. 16HBE14o⁻ cells were treated with BIRB-796 (1–1000 nM) alone and in combination with dexamethasone (0.1 nM) for 30 min and glucocorticoid receptor (GR) nuclear translocation determined by immunofluorescence. The effects of TNFα stimulation on the phosphorylation of p38 and GR (serine 226) in 16HBE14o⁻ cells were determined by Western blot analysis.

Results Maximum inhibition of dexamethasone and BIRB-796 in combination was significantly greater than either drug alone for LPS and TNFα induced IL-6 and IL-8 and for Poly I:C induced RANTES ($p < 0.05$ all comparisons). BIRB-796 (1000 nM) alone had no effect on GR translocation. BIRB-796 (1000 nM) used in combination with dexamethasone (0.1 nM) significantly increased nuclear GR (76.6% nuclear staining) compared to dexamethasone (0.1 nM) alone (4% nuclear staining). TNFα stimulation increased both p38 and GR serine 226 phosphorylation by 15 min. Pre-incubation with BIRB-796 abolished p38 phosphorylation and reduced GR serine 226 phosphorylation.

Conclusion P38 MAPK inhibition enhances the effect of corticosteroids on inflammatory cytokines in human epithelial cells. This enhancement is due to inhibition of p38 dependent phosphorylation of GR serine 226 which leads to increased nuclear localisation of GR.

Keeping your distance: telemonitoring and telehealth

P27 THE USE OF TELEMONITORING TO ASSIST IN THE EARLY SUPPORTED DISCHARGE FOR PATIENTS ADMITTED WITH AN EXACERBATION OF COPD

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Introduction In 2011 the Whole Systems Demonstrator programme findings showed that, if used correctly, Telehealth can deliver 14% reduction in bed days and an 8% reduction in tariff costs in patients with chronic conditions. However little data is available on using Telehealth to assist in the acute setting of early supported discharge of COPD patients as most previous studies focused on its use to assist the long term case management of these patients.

Methods After training of staff within the COPD early support discharge (ESD) team in Salford (CAST), 17 HomePods were made available for this 12 months pilot starting in 2013. Patients were selected based on their ability to use the technology and on availability of HomePods. Pods were left with patients for 30 days and provided remote real-time monitoring of patients before they were re-deployed again to another patients. During the deployment period, patients were supported by a combination of telephone calls and home visits.

Objectives

- Measure the impact of Telehealth on 30 day readmission rates in this cohort
- Test the impact of new technology on caseload/ work load of CAST
- Test the acceptability of Telehealth on this cohort and on CAST
- Assess impact on ability to selfcare
- Measure patients' satisfaction

Outcomes – 73/285 (25%) patients received this intervention with the CAST team

- 30 day re-admission rates within the intervention group was 3% compared to 8% in the other ESD patients, and 18% within the Respiratory directorate
- Those in the telehealth group accounted for 5% of all home visits and 25% of all phone calls made by CAST
- The capacity of CAST was increased from 15 Cases to 18 cases at any one time (20%)
- Patients' survey showed excellent impact on

- Patients' satisfaction
- Confidence in self care
- Patients acceptability and likeability to Telehealth
- Good suggestions were made by patients for improvement

Conclusions The use of Telehealth in the context of ESD for COPD patients admitted with an exacerbation appears to have favourable effect on relevant outcomes without impact on workload and therefore might be a useful tool to consider.

P28 THE USE OF SMARTPHONE APPLICATION (COPD ASSIST) TO SUPPORT THE IMPLEMENTATION OF LOCAL PRIMARY CARE GUIDELINES ON THE MANAGEMENT OF PATIENTS WITH COPD

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Introduction Smartphone applications (apps) have become increasingly popular and offer us up-to-date access to information “on the go”. Many national and international societies, medical journals and healthcare organisations develop their own apps; However using apps on a local level to promote implementation of local COPD guidelines and education has not been previously evaluated.

Methods Funding was provided by Salford's CCG innovation fund. A Smartphone app developing firm was commissioned and a development plan was agreed as follows:

1. Close liaison with the lead respiratory physician throughout the project.
2. A primary care focus group helped develop a Beta version for testing prior to launch.
3. App launched as “COPD Assist”
4. Promotion to primary care clinicians via newsletter articles, press releases, seminars, and the intranet
5. Regular data collection on app downloads to measure usability
6. Users' feedback and suggestions via app reviews
7. App downloads initially restricted to Salford clinicians

Objectives

1. Provide primary care clinicians with access to local guidelines and relevant contact details for COPD services anytime, anywhere.
2. Provide the most up-to-date guidelines
3. Offer clinicians access to educational material including videos (inhaler technique, spirometry, and pulmonary rehabilitation) and the opportunity to share this information with patients.
4. Provide up to date pricing of various inhaled therapies

Poster sessions

Outcomes COPD Assist was launched in March 2014, then publicised to all Salford's primary care clinicians supported by 5 training seminars with over 70 clinicians attending.

Within 4 months following its launch, COPD assist was downloaded 622 times by different users, with an average use time of 7 min and average of 9 screens viewed per session. 52% of users have used the app more than once.

Feedback was excellent, particularly around ease of use and simplicity.

Conclusions This bespoke smartphone app to support the implementation of local primary care COPD guidelines appears to be widely acceptable to users and could potentially promote these guidelines. However, more research around clinically meaningful outcomes, such as adherence to guidelines and impact on prescribing, is required to assess the true impact of such technology on the management of COPD in primary care.

P29 IMPACT OF RESPIRATORY VIRTUAL CLINICS IN PRIMARY CARE ON RESPONSIBLE RESPIRATORY PRESCRIBING AND INHALED CORTICOSTEROID WITHDRAWAL IN PATIENTS WITH COPD: A FEASIBILITY STUDY

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Introduction There is considerable variation in accuracy of diagnosis and long-term management of COPD in the UK. High rates of inhaled corticosteroid (ICS) prescribing have been reported, raising concerns about their over use, with less focus on high value interventions like stop smoking support/pulmonary rehabilitation. ICS are indicated in severe COPD patients (FEV₁ <50% predicted) with frequent exacerbations (>2 per year). Primary care data from SE London showed that 38% of COPD patients were over treated with high dose ICS, resulting in 12 additional cases of pneumonia, and costs >£500,000, annually. There is limited guidance on methods and feasibility of withdrawing ICS in these patients.

Methods A responsible respiratory prescribing group including CCG medicines management, respiratory pharmacist and integrated respiratory team agreed COPD prescribing guidance across primary/ secondary care. GPs were supported with COPD review templates, written step down protocols and educational events. Virtual clinics with an integrated respiratory consultant/ GP respiratory lead were offered to support ICS withdrawal in primary care.

Abstract P29 Table 1 Outcomes associated with the ICS gradual withdrawal recommendation

Outcome	Number of patients (n = 198)
ICS successfully stopped	61
ICS stepped down	58
Patient due for step down at time of data submission	33
Patient was not stepped down, but reason not given	19
Patient asked not to have ICS stopped	9
Patient did not tolerate lower dose	9
Patient excluded as no-longer fulfilled inclusion criteria	7
Patient could not be contacted	2

Results 45/48 (94%) of CCG practices took part. Data from 372 patients on COPD registers reviewed over 25 virtual clinics is presented. 321 (86%) patients had confirmed COPD (including 33 with COPD and asthma), 34 had asthma, 15 needed more spirometry and 2 had another diagnosis. 279/321 (87%) patients had a recommendation made: 64 (23%) referred for PR, 53 (19%) for spirometry, and 45 (16%) for smoking cessation. Changes to drug therapies were also recommended: 42 (15%) patients had a LAMA recommended, 16 (5%) a LABA, and while 117/321 COPD patients (37%) required no change to ICS therapy, a graduated step down/stop was suggested for 198 (63%). The outcomes associated with this are in Table 1.

Overall, from Q4 13/14 prescribing data, there was a 4% decrease in high dose ICS (as proportion of total ICS use) resulting in a saving of £50,000.

Conclusion Integrated working through respiratory virtual clinics offers hugescop to improve high value care for COPD patients. Overuse of ICS in COPD is common and GP-led withdrawal of high dose ICS where appropriate is feasible, acceptable and well tolerated by patients.

P30 USE OF A REGIONAL COPD DASHBOARD TO EFFECT LARGE SCALE CHANGE J CONGLETON, J WOOKIEY, J BOTT KSS AHSN RESPIRATORY PROGRAMME

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Large scale change is difficult to bring about. The regional Respiratory Programme began in 2011 with the aim of improving outcomes in COPD and asthma. We designed a COPD dashboard with key metrics aiming to track progress and encourage involvement in service improvement. The Quality Observatory maintain the dashboard and release quarterly updates which we email out to our network members and other key people (n = 396) accompanied by commentary indicating issues for consideration and highlighting trends. The target audience includes clinicians in primary, secondary and community care plus managers and commissioners. This work is supplemented by running oxygen and pulmonary rehabilitation clinical networks which provide support and training to clinicians plus a quarterly educational and information sharing epublication 'Breathing Matters'. We track trends in metrics. COPD bed days are a key outcome measure and the table below shows the yearly value since the program commenced.

Looking at the admission figures on a population basis i.e. admissions per 1,000 COPD population (population weighted for prevalence of COPD using ERPHO modelled estimates and projections) there is a similar trend:

County 1 2010/11 17.9 per 1000 vs 13.2 per 1000 in 2013/14

County 2 2010/11: 12.5 per 1000 vs 10.3 per 1000 in 2013/14

County 3 2010/11: 15.8 per 1000 vs 13.8 per 1000 2013/14

Abstract P30 Table 1

	County 1	County 2	County 3	Total
2010/11	24,788	17,976	11,596	54,360
2011/12	22,272	16,764	11,888	50,924
2012/13	23,884	16,996	11,912	52,792
2013/14	20,820	14,300	10,380	45,500