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ABSTRACTS

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IMPLEMENTATION SCIENCE / SERVICE DEVELOPMENT ABSTRACTS

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IS001

Controlling TB in a stigmatizing community of Khyber Pakhtunkhwa Pakistan: decade of success story

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Brief outline of context: Pakistan ranks 5th amongst 22 high burden countries in the world. Here TB incidence is 276/100,000 populations. Khyber Pakhtunkhwa (KP) is with security and culturally sensitive risks.
Brief outline of what change you planned to make: (a) Empowering community with strong Advocacy skills; (b) To identify and refer more TB patients; (c) Community would directly observe the patients; (d) Community will trace loss to follow up patients and support for a favorable treatment outcomes.
Assessment of existing situation and analysis of its causes: About 70,000 new TB Patients are added every year. Most are belonging to the economically productive age groups. Literacy rate is about 50%, which is more in females. Cultural taboos, security risks factors like, poverty, poor food, no jobs, high disease burden, unhygienic living conditions has worsened the scenario.
Strategy for change: PTP KP provides free TB care services to about 27 million populations in the province and people from adjacent tribal agencies including Afghans residing in the province are also benefited. There are 232 diagnostic and 806 treatment centers. Free services under DOTS strategy were ensured by the Program. The target was to detect at least 70% of cases and treat successfully 85% of them to make TB free KP Pakistan by end of 2015.
Measurement of improvement: This was a retrospective study from 2002 to 2013. All patients were registered in diagnostic centers and data was quarterly validated and reported to districts and main PIU, as per WHO/NTP recommended standard format. The data of the last 10 years was analyzed in Excel software, results were drawn with conclusion. TB notification increased to 164 per hundred thousand and treatment success rate also increased to 93%. The default rate was just 1.6%.
Effects of change: PTP KP registered 331952 all TB Cases and 126491 Smear Positive TB cases. The CNR all TB cases increased from 39 ($n = 8{,}010$) in 2002 to 164 per hundred thousand ($n = 38{,}795$) in 2013. Cure rate improved from 79% ($n = 2{,}336$) in 2002 to 81.6% ($n = 11{,}322$) in 2013. Default rate dropped down from 9% in 2002 to 1.63% in 2013. Treatment Success Rate improved from 86% in 2002, to 93.73% in 2013. More patients are seeking treatment now.
Lessons learnt: Although PTP-KP played an integral role in controlling TB. However to sustain the performance and to reduce the human suffering, stigma, morbidity and socioeconomic burden; further efforts are essential to combat upcoming challenges of MDR TB and TB HIV Co-infection. Tracing missing cases, strengthening private sector, lowering poverty, more TB awareness is crucial.
Message for others: Healthy Pakistan would be a better partner of world over.
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IS002

Implementation of an easy-to-use case note insert for asthma management may improve quality of care for asthma patients in a general practice setting

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Brief outline of context: Asthma management in general practice in Singapore faces many challenges. Patients tend to see different practitioners in both private and public sectors and default followup when they feel better. Many General Practitioners (GPs) are also not current in following latest guidelines from GINA (Global Initiative for Asthma). GPs also stock a limited range of inhaled corticosteroids compared with what is available on the market. As such, asthma management in private sector general practice tends to be suboptimal with poor documentation and poor adherence to practice guidelines.
Brief outline of what change you planned to make: We implemented an easy-to-use case note template for all patients followed up by our clinic for asthma. It has itemized step-wise therapy for asthma based on GINA guidelines, as well as prompts for doctors to review aspects of asthma management which lead to holistic care. It also allows for review of multiple visits on the same page giving a good overview of asthma control over several visits.
Assessment of existing situation & analysis of its causes: We looked through the written case notes of all asthma patients on the chronic disease register in 1 clinic and assessed different parameters of acute and chronic management of asthma. What was not documented was deemed to not have been done.
Strategy for change: Baseline data was collected in May 2014. Implementation of new case note insert was done in late June 2014 (in collaboration with the 2 anchor doctors in the clinic). Data from the register was reviewed again in October 2014.
Measurement of improvement: 9 patients were seen for asthma follow up in the 4 month intervention period. Smoking assessment increased from 30 to 100%, ACT score being assessed improved from 20 to 100%, documented appropriate management based on GINA guidelines improved from 20 to 56%, and asthma action plan (or smart therapy) given to patient improved from 5 to 67%.
Effects of change: Improvement in quality of care was achieved in this simple pilot intervention. We recommend implementation of this insert to the rest of the clinics in the healthcare group.
Lessons learnt: Simple interventions can have profound impacts provided it is acceptable to anchor doctors and clinic staff and it helps rather than hinders effectiveness of consultations.
Message for others: Adherence to good clinical practice guidelines can be achieved in general practice in Singapore. Clinics should adopt a well thought through management strategy for the various chronic diseases with the limited drugs in their formulary. A well kept chronic disease database is very helpful for primary care research and continuous clinical and quality improvement in primary care.
Declaration of interest: None
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IS003

Implementing the assessment of burden of COPD (ABC)—tool in primary and secondary care: qualitative assessment amongst healthcare providers

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Brief outline of context: The Assessment of Burden of COPD (ABC)- tool is a new tool developed in the Netherlands that aims to measure the experienced burden of COPD in patients and to facilitate healthcare providers and patients in making a treatment plan. The tool encompasses a questionnaire and a treatment algorithm, including a visualization of the outcomes.
Brief outline of what change you planned to make: Our goal was to assess potential barriers and facilitators of implementation of this newly developed tool in routine primary and secondary care.
Assessment of existing situation & analysis of its causes: Current guidelines describe the necessity of not only assessing the patient's airway obstruction, but also the experienced burden of COPD. However, there is not yet an instrument availably that measures the burden of COPD and at the same time visualizes the specific dimensions of this burden and provides treatment advice.
Strategy for change: The ABC-tool has been developed to structure the consultation with the COPD patient. Therefore, it can facilitate the communication with patients about their experienced burden and the formulation of a personal treatment plan.
Measurement of improvement: We conducted 11 in-depth interviews and 1 focus group (N = 4) with healthcare providers. They are enthusiastic about the tool. They reported that the tool contributed considerably to the communication with the patient. Difficult topics, such as emotions, are easier to address when being visualized. However, our findings also showed that, in order to be successfully implemented, the ABC-tool has to be integrated in existing ICT systems of healthcare providers, otherwise it will be too time-consuming to use it during each consultation with every COPD patient.
Lessons learnt: Providing structure and visualization, using the ABC-tool, is a useful way of communicating with the patient and making a tailor-made treatment plan. The tool needs to be integrated into the existing ICT systems of the healthcare providers in order to implement it in daily care.
Message for others: Tools that visualize patient reported outcomes can be very helpful in the communication with patients. However, new instruments should be compatible and therefore implementable in the ICT systems healthcare providers already use.
Declaration of interest: This research is subsidized by the Dutch Lung Alliance.
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IS004

NCD Management (respiratory diseases) role of primary care respiratory physician in developing country

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Brief outline of context: Non Communicable Diseases (NCDs) kill more than 36 million people each year. Nearly 80% of NCD death (29%) occurs in low and middle countries. More than nine million of all deaths attributed to NCDs occur before the age of 60.Cardiovascular diseases account for most NCD deaths (17.3 million), cancers (7.6 million), respiratory diseases (4.2 million) and diabetes (1.3 million).Chronic respiratory diseases like Asthma & COPD increasing day by day. Majority of patients treat by general practitioner (Primary Care Physician).It is often difficult to control, even with multiple therapies.
Brief outline of what change you planned to make: To determine the unmet medical need of NCD management by using prescribing behaviour of general practitioner and find out a satisfactory way in respirology of developing countries.
Assessment of existing situation & analysis of its causes: According to Second national Asthma Prevalent Study (NAPS) 2010, in Bangladesh out of 150 million population, 10.5 million (7% of the population) were suffering from bronchial asthma. COPD was the sixth leading cause of death worldwide in 1990, it is predicted to become the third one in 2020.Prevalency of COPD in > 40 years population was 21.24% in last national COPD study at 2010.
Strategy for change: This was a retrospective observational study conducted from primary care respiratory centre at Rangpur in Bangladesh from January 2011 to December 2013. Data collected by face to face interview. Asthma & COPD education, registration, consultation, investigation, diagnosis, prescription & counselling were mandatory for all patients. Asthma & COPD diagnosed by spirometer.
Measurement of improvement: Disease prognosis was excellent.
Effects of change: By applying a model of primary care respiratory service delivery system and analyzed 9,600 patients, 97% were highly satisfied and 3% complain longer waiting time.
Lessons learnt: General Practitioner (Primary Care Physician) commonly prescribe multiple therapies and the result indicate insufficient symptom relief of asthma & COPD. There is a clinical need of a model of primary care respiratory service delivery system for more efficient NCD management in developing countries.
Message for others: Follow a model of primary care respiratory service delivery system for more efficient NCD management in developing countries.
Declaration of interest: Nothing, Self contribution in personal primary care respiratory centre.
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IS005

Preoperative smoking cessation intervention by general practitioners

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Brief outline of context: Tobacco smoking is the largest avoidable cause of premature death and disability in both developed and developing countries. Interventions to help smokers to quit are effective and highly cost effective, and should therefore be offered to all smokers as a routine component of healthcare provision.
Brief outline of what change you planned to make: Currently, preoperative smoking cessation is recommended as a standard operating procedure for smokers scheduled for elective surgery. However, the preoperative contact with the hospital may often be too short for the patient to fulfil a preoperative lifestyle intervention programme of 4–8 weeks without postponing the date of surgery. Thus the involvement of the general practitioner (GP) becomes relevant.
Assessment of existing situation and analysis of its causes: Smoking has a negative effect on surgical outcome, as the carbon monoxide and nicotine, inhaled from smoking a cigarette, increases heart rate and blood pressure and the body's demand for oxygen. It is well documented that preoperative smoking cessation programmes of 4–8 weeks duration, significantly reduce the increased risk of complications after surgery. Unfortunately, only 58% of surgeons and 30% of anaesthetists routinely advise patients to stop smoking before undergoing a surgical procedure.
Strategy for change: Our proposals are: (a)All GPs should undertake brief intervention training about smoking cessation; (b) Smoking cessation preoperative intervention should be seen as a basic component of evidence based commissioning for elective surgery; (c) GP of the patient should be informed that the patient is on the list of an elective surgery; (d) GPs will encourage the patient to quit smoking prior to hospitalized surgery, refer him \her to Tobacco Cessation Clinic if further assistance is necessary and monitor the process; (e) GPs should receive an attractive additional reimbursement in order to manage a successful smoking cessation programme.
Effects of change: A systematic smoking cessation programme targeted at patients on waiting lists for elective surgery could result in between 4,000 and 9,000 smokers quitting each year.

Message for others: Development and evaluation of new strategies for cooperation between primary care providers and surgical departments are urgently required in order to offer intervention programmes before elective operations.
Declaration of interest: The authors have no conflicts of interest.
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IS006

The effects of the Spirometry learning Module (SLM) on point-of-care spirometry

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Brief outline of context: Several strategies have been employed to improve the quality and quantity of spirometry in primary care with programs from both the USA and Netherlands highlighting the value of a more cohesive approach between general practice staff and appropriately trained respiratory professionals.
Brief outline of what change you planned to make: The Spirometry Learning Module (SLM) is an innovative training model developed to improve the quality of point-of-care spirometry testing in both hospital and primary care settings. The SLM focuses on key aspects of spirometry test performance, measurement and interpretation and combines an interactive, web-based education component and two, 2-hour practical sessions facilitated by a respiratory scientist. The quality of completed spirometry measurements is evaluated over a further twelve week period where participants submit spirometry assessment worksheets for review by a respiratory scientist mentor.
Assessment of existing situation and analysis of its causes: The IPCRG Research Needs Statement 2010 identified that COPD is both under, and over-diagnosed in primary care. Despite international guidelines recommending spirometry as an essential tool to aid in the diagnosis and monitoring of chronic airways disease, the quality of point-of-care spirometry testing remains sub-optimal.
Strategy for change: This study aims to measure the effect of the Spirometry Learning Module (SLM) on the quality of spirometry measurements and confidence, knowledge and interpretative skills of participants. Perceived confidence and knowledge in test performance was assessed using a 7-point Lickert scale and the application of test performance criteria and interpretative skills by questions relating to five common, case-based, spirometry measurements.
Measurement of improvement: Sixty-three participants enrolled in the SLM with 26 completing the 22 week follow-up assessment. Perceived confidence (pre: median 4; post: median 6) and knowledge (pre: median 3; post 5) both increased significantly. The number of case-based questions answered correctly also showed significant improvement (pre: mean 48.6%, s.d. 27.5%; post: mean 91.8%, s.d. 7.0%; $P < 0.01$).
Effects of change: The SLM learning approach, employing web-based learning tools and an extended period of mentoring and feedback from respiratory scientists, may prove more effective than traditional workshop-style teaching alone.
Lessons learnt: Reduction of face-to-face contact time by increased reliance on web-based education delivery enhances training accessibility, particularly in primary care or in rural and/or remote settings. This model is easily scalable and applicable to not only Australian clinicians but also to those in other global locales.
Message for others: By improving the quantity and quality of point of care spirometry testing for patients with respiratory symptoms or at risk of respiratory illness, the SLM will contribute positively to the diagnosis and management of respiratory disease.
Declaration of interest: There are no conflicts of interest to declare.
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IS008

The Implementation of Prolanis as an excellent program in the management of asthma and COPD patients for participants of BPJS Kesehatan in Klinik Insepar

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Brief outline of context: The PROLANIS is a health care system and a proactive approach is implemented in an integrated manner involving participants, Health Facilities, and BPJS Kesehatan for participants BPJS Kesehatan who suffer chronic diseases to attain quality of life optimally by the effective and efficient of health costs.
Brief outline of what change you planned to make: The Implementation of Prolanis would be expected to reduce the costs, number of the uncontrolled patients will decrease, will reduce number of referral and hospitalization. So, avoid exacerbations, and with routine education, patients can identify and reduce the risk factors and adjust the activity limitations and to prevent the worsening of lung function.
Assessment of existing situation & analysis of its causes: Before implementing Prolanis, management of Asthma and COPD was not efficient and effective. Expensive treatment, low socio-economic conditions, and located in the rural area/underdeveloped region is still a big issue. So, there are many patients were only partially controlled and even uncontrolled, so they must be referral to the Hospital.
Strategy for change: All of BPJS Kesehatan participants with Asthma and COPD are expected voluntarily to join as Prolanis members. Starting with building capacity and competence of the Doctors. Further meetings periodically to evaluate activities and improve knowledge. Activities Prolanis are counselling, referral back, treatment, medication, laboratory check, healthy exercise, education, home visit, reminder via SMS gateway, and monitoring of health status.
Measurement of improvement: Percentage of patient numbers with Asthma and COPD who participated in Prolanis to all patients with Asthma and COPD who was registered as a participant of BPJS Kesehatan in Clinic. The percentage of patient numbers who followed all the Prolanis activities regularly. The percentage of patient number who experienced an exacerbation and were referred for during joining Prolanis.
Effects of change: The doctor-patient relationship be better. Improved patient compliance in treatment and participation. Operational costs more efficient, because all expenses Prolanis covered by BPJS Kesehatan 100% participants with Asthma and COPD has been a Prolanis members. 95% members are active members follow all Prolanis activities. Number of patients who an exacerbation greatly decreased. Number of patients who referred to the hospital during the last 4 month is nothing.
Lessons learnt: The Implementation of Prolanis in Klinik Insepar has provided benefits and advantages in the management of Asthma and COPD.
Message for others: Let's continue to improve themselves and develop the new program to improve primary health care as a form of our devotion especially for rural communities, remote areas, and underdeveloped regions.
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IS009

The probability of developing tuberculosis among healthcare workers assigned in high-output and low-output areas in Philippine General Hospital

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Brief outline of context: Pulmonary tuberculosis (PTB) is a known biological hazard among healthcare workers. Majority of Healthcare workers (HCWs) are at risk, but not all develop the disease. Individual health factors, environmental and psychosocial factors may contribute to the development of it. Periodic risk assessment and implementation of TB control program in the workplace are

important in maintaining health and safety of HCWs from biological hazards such a PTB.

Brief outline of what change you planned to make: Results of this study may be use as a basis in making a risk assessment tool for HCWs and formulation of a comprehensive policy and program on TB prevention and control in the hospital.

Assessment of existing situation and analysis of its causes: University of the Philippines-Philippine General Hospital is a tertiary government hospital located in Manila. It is a 1500-bed capacity hospital catering more patients than its capacity.

Pulmonary tuberculosis remains in the top 10 final diagnosis of in-patient and out-patient department. Early diagnosis and treatment is important in controlling transmission of the disease from patient to patient, patient to HCW, HCW to HCW, or HCW to patient. There is a need to have a good implementation of TB program and policy in the hospital.

Strategy for change: Annual health surveillance and risk assessment should be done. Analysis of the report will dictate the action plan or intervention needed to come up with a TB in the workplace program and policy designed for healthcare workers. Implementation and regular program evaluation should also be done to assure patient and healthcare workers' health and safety.

Declaration of interest: It has been the advocacy and mission of every physician and allied health professionals to improve the quality of patient care. The healthcare workers tend to neglect their own health and safety. HCWs need care as well as patients. Pulmonary tuberculosis is one of the major health concerns in the world especially in the Philippines. PTB is a curable infectious disease but still remains to be in the top causes of morbidity and mortality in the Philippines. Continuous effort should be done by different stakeholders to protect HCWs from biological hazards such as TB.

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IS010

Using e-mentoring system to strengthen the performance of respiratory care for general practitioners in rural areas in Viet Nam

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Brief outline of context: Overloading of patients in secondary and tertiary settings is a prominent problem in Vietnam's health care system. One of the main reasons is that patients from the rural areas have lesser conviction and trust to their General Practitioners' (GP) performance. A question of improving GPs medical practice performances at its lowest cost is still a tough question to answer. Long-term healthcare system and medical educational system reforms were implemented but short-term interventions must be prioritized and must be taken into considerations based on the current demand and situation.

Brief outline of what change you planned to make: Give a chance for GPs in rural areas to improve their performance in primary respiratory care.

Assessment of existing situation & analysis of its causes: Continuing Medical Education is usually offered in big cities by universities, hospitals, and drug companies. Doctors in rural areas have limited opportunity to improve their field of expertise because they still need to travel to these urban places and invest a lot of time, money, and energy to further hone their medical skills and knowledge.

Strategy for change: An E-Mentoring System which is a combination of e-learning and internet based electronic medical record (i-EMR) was built to mentoring GPs in rural areas. The first stage of learning is focused in primary respiratory care. The system can connect a collaborative center of e-mentoring to six other sites. Doctors in these sites sequentially presented their real cases with details posted in the i-EMR system. Live group discussion with facilitator/lecturer from the center and participants from the other sites was conducted. Some lectures were given through this system. Performance of GPs then continuously mentored through i-EMR system and case presentation.

Measurement of improvement: Most GPs and facilitators shared their great appreciation and satisfaction about the system. This requires no travel costs, fewer administrative amenities, and it can connect volunteers and mentees at a fraction of the cost of face-to-face programs. Patient safety issue, an indicator in i-EMR system, is improved.

Effects of change: Doctors who are working in remote areas have chances to improve their respiratory care performance without leaving their respective site and localities. Patients' safety is improved over time.

Lessons learnt: Medicine performance of GPs in rural areas can be improved effectively with lower cost through the E-mentoring system with ADSL Internet which is popular in rural areas in Viet Nam.

Message for others: E-mentoring system can be used in developing countries to mentor the GPs performance in remote areas with the collaboration of international and local expert team.

Declaration of interest: Vinh Nguyen and An Pham have no interest relating to this article.

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