

ABSTRACTS OPEN

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IS-01. '30 seconds to save a life'

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Brief outline of context: Tobacco smoking is the single most preventable cause of death, resulting in an estimated 6 million premature deaths globally per year. Stopping smoking can reduce risk of premature death and improve current and future health.

Brief outline of what change you planned to make: Very brief advice (VBA) is a proven clinical intervention, which identifies smokers, advises them on the best method of quitting and supports subsequent quit attempts. VBA comprises three elements: ASK, ADVISE, ACT and is designed to be used opportunistically to patients in < 30 seconds by health care workers in almost any situation with a smoker. We report an ongoing implementation study to (i) adapt the existing VBA intervention to ensure it fits the context of four low- and middle-income countries, (ii) provide training for healthcare workers in the knowledge and skills to deliver VBA, (iii) evaluate the training programme and (iv) measure self-reported clinical impact of VBA training.

Assessment of existing situation and analysis of its causes: Engagement: Stakeholders and country leads review the standard UK model for the delivery of VBA on smoking, contribute to adaptations and explore opportunities for scale-up of training. Strategy: The adapted VBA model is developed and translated into local languages for local implementation by local health care workers. On completion of training they take every opportunity in their clinical/professional practice to offer VBA on smoking to patients/clients. Outcomes: Participant (i) recruitment and retention, (ii) knowledge acquisition, (iii) training evaluation, (iv) quantification of VBA delivery, (v) acceptability, practicability and feasibility of delivering VBA and (vi) cost analysis of implementation.

Conclusion: VBA requires adaptation before implementation.

Effects of change: VBA prompts quit attempts.

Lessons learnt: Concern about effective delivery of VBA training by English speakers to health care workers via a translator and long-term sustainability were addressed by revising implementation methods, adapting the VBA training resources, to enable local VBA trainers to deliver VBA training to health care workers in the local language.

Message for others: Effective implementation requires significant stakeholder engagement.

Declaration of interest: Andy McEwen has received travel funding, honorariums and consultancy payments from manufacturers of smoking cessation products (Pfizer Ltd, Novartis UK and GSK Consumer Healthcare Ltd) and hospitality from North 51 who provides online and database services. He also receives payment for providing training to smoking cessation specialists and receives royalties from books on smoking cessation.

Andy is a trustee and board member of the charity Action on Smoking and Health and an associate member of the New Nicotine Alliance, a charity that works to foster greater understanding of safer nicotine products and technologies.

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IS-03. Blended e-learning approach for improving asthma care in Bangladesh

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Brief Outline of Context: Asthma is a public health burden in Bangladesh as evident from the prevalence of Asthma (wheeze in the last 12 months) in 1999 (6.9% (95% CI: 6.2–7.6)¹) and in 2010 (6.96% (95% CI: 6.90–7.04)²). Evidence-based asthma care can make a visible change but there is lack of awareness among clinicians, public and policymakers regarding prevention, diagnosis and treatment of Asthma. In June 2009, World Health Organization Global Alliance against Chronic Respiratory Diseases (WHO–GARD) approved the demonstration project 'Better Breathing Bangladesh (BBB)' to develop a better surveillance, prevention and control of chronic respiratory diseases by face to face training and providing the service of skilled primary health care professionals which proved to a success with limited reach. In the above context, the blended e-learning approach on Asthma was piloted to reach to the large number of physicians.

Brief outline of what change you planned to make: In 2015, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), International Primary Care Respiratory Group–Bangladesh (IPCRG-BD; currently BPCRS) and Education for Health (UK) jointly initiated a 6-month long training course for family physicians where theories were taught online, clinical and practical sessions were conducted face to face. Pre and post training change in their knowledge and confidence in key attributes of the clinical guidelines including patient education were measured using a Likert scale.

Conclusion: To combat the asthma burden in Bangladesh practising physicians would benefit from awareness and skills building interventions.

Effects of change: As of April 2017, 145 physicians completed the asthma training module. Of them, 123 trainees completed a questionnaire before the start of training and 73 completed the same questionnaire immediately after the end of course. The results showed that trainees' confidence levels related to knowledge of asthma and its management increased with specific reference to asthma clinical guidelines. Also, their confidence level in educating patients and the use of lung function tests and interpretations were found improved.

Lessons learnt: Nurses and other health workers also should be included.

Declaration of Interest: None.

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IS-04. Communicating research evidence to end-users: a systematic approach to knowledge creation

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Brief Outline of Context: Knowledge creation, the generation of tools and key messages tailored towards the needs of the audience, forms an integral part of the knowledge-to-action framework. This framework is aimed at bridging the gap between research and evidence-informed decision making. Although principles of science communication, data visualisation and user-centred design largely impact the effectiveness of communicating research evidence to end-users, their role in knowledge creation is still limited.

Brief outline of what change you planned to make: This study aims to provide to researchers a systematic approach on how the process of knowledge creation can be put into practice.

Assessment of existing situation and analysis of its causes: A systematic two-phased approach towards knowledge creation was formulated and executed through a case study. First, during a preparation phase main objectives were formulated and the target audience was defined. Subsequently, a developmental phase facilitated how the content was 'said' (language) and how it was communicated (channel). This developmental phase proceeded via two intertwined pathways: (1) a translational cycle, in which core components on the language used and the presentation were incorporated and (2) a design cycle which incorporated core components on navigation, organisation, design aesthetics and semiotics. The entire approach was demonstrated by the Free Respiratory Evaluation and Smoke—exposure reduction by primary Health cAre Integrated gRoups FRESH AIR study, an implementation science project targeting chronic lung diseases in diverse low-resource settings. The FRESH AIR case study illustrated how the phases in this systematic approach can be operationalised and how created knowledge can be delivered to the end-user.

Conclusion: The proposed approach offers researchers a systematic, practical and easy-to-implement tool to facilitate effective knowledge creation towards end-users, such as policy-makers and healthcare professionals. Through the integration of core components of knowledge creation, evidence-informed decision making will ultimately be optimised.

Clinical Trial Registry: NTR5759 FRESHAIR <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

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IS-05. Development and implementation of lung health awareness programme for community health workers in the rural district Masindi of Uganda

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Brief Outline of Context: Chronic lung disease is common but under-reported in sub-Saharan Africa. Following a survey in rural Uganda which found 16% of the adult population had chronic obstructive pulmonary disease (COPD), we developed a tailored lung health awareness programme about the local risk factors for COPD and common chronic lung diseases. This project was a 2-year train-the-trainer programme conducted by healthcare workers (HCW) and community health workers (CHW) in Masindi district of Uganda.

Brief outline of what change you planned to make: Working with HCW who conducted the Free Respiratory Evaluation and Smoke-exposure reduction by primary Health cAre Integrated gRoups (FRESH AIR) Uganda survey, and therefore had a commitment to the project aims, we taught HCW how to teach CHW about lung health and how they could teach their communities. We held a series of meetings with stakeholders to develop the project strategy and contents of the education materials. Draft education materials were shared with senior clinicians, administrators including the Secretary for Health and District Health Officer in Masindi, through all grades of clinicians to CHW and villagers. Incorporating all feedback, we designed a training programme with HCW who were taught how to train other HCW to deliver the programme to CHW. The CHW then taught people in their villages. Radio programmes and radio hits were run for three consecutive months on the local radio station in three languages.

Assessment of existing situation and analysis of its causes: Education materials for use in training HCW and CHW using desk-aid flip-over charts and posters have been designed and approved by the Ministry of Health. To date, we have trained 12 HCW who then trained 47 HCW and 159 CHW. We tested their knowledge with questionnaires. Approximately 15,000 people have received the messages directly and thousands more through mass media messages.

Conclusion: Using the local system, we developed an effective lung health awareness programme for CHW to teach the communities about the damaging effects of biomass smoke and tobacco smoking.

Declaration of Interest: FRESH AIR was funded by a research grant from European Union's Horizon 2020 research and innovation programme under grant agreement No 680997, TRIAL ID NTR5759 <http://www.trialregister.nl/trialreg/admin/rctsearch.asp?Term=23332>

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IS-16. Solo Physicians can do wonders to control tuberculosis (TB) in private sector: a step towards Zero TB in Khyber Pakhtunkhwa Pakistan

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Brief Outline of Context: Khyber Pakhtunkhwa is one of the provinces of Pakistan with 270 per 100,000 tuberculosis (TB) incidence rate. Provincial TB Control Program (PTP) Khyber Pakhtunkhwa (KP) provides free TB care services to about 25 million local population. There are 78 Labs and 392 General Practitioners enrolled in 16 districts across the province. Sputum smear microscopy and anti-TB therapy (ATT) under directly observed treatment, short course strategy is provided by the Program. The objective was to detect all TB cases attending these physicians and treat successfully 90% of them.

Brief outline of change: This was a retrospective study of 2016 with four main interventions. All patients attending the clinics of the physicians were sorted out and symptomatic patients were screened through screening methods smear microscopy (SM). Screening was done through, clinical history; signs and symptoms and correlated with the SM. In first intervention type, 392 general practitioners (GP) were enrolled. In second type, four non-governmental organisations (NGO) were involved. In third type, two private hospitals were included. In fourth type, six parastatal hospitals were included. As per World Health Organization (WHO) National TB Control Program (NTP) protocol, only those patients were declared positive whose SM indicated positive results. The rest of the negative patients were educated for the care of patient and personal biosafety. The data of the last 1 year was analysed through SPSS software (V15, IBM Corporation, USA).

Assessment of existing situation and analysis of its causes: About 10,512 presumptive cases were registered for free TB treatment in the private sector. These were 23% of the total cases registered (45,452) about 7,844 pts (74.6%) were treated by solo physicians. NGO registered about 2,427 (23%). The private hospitals registered 186 cases (1.76%) while parastatal institutions only 56 cases (0.53 %). There was no significant difference between male to female ratio ($P < 0.05$). Almost 80% patients were 14 to 54 years.

Conclusion: Solo physicians are vital to end TB. More physicians should be trained and involved in outreach services to trace missing patients and avert possible risk of multi-drug-resistant TB (MDR TB) and TB HIV co-infection. Implementation of TB as notifiable disease will bear good results. Innovative approaches must be tried to strengthen this.

Effects of change: Solo physicians registered large number of TB Patients, which helped approach targets.

Lessons learnt: Solo physicians should be involved as per national guideline. Community outreach services with chest camps and mass mobilisation be conducted.

Message for others: (i) Innovative approaches must be tried to trace missing cases of TB. (ii) Declare TB as a notifiable disease by the Government of KP Pakistan and bind all clinicians to refer cases for notification.

Declaration of Interest: Data and information presented are correct and have no pecuniary or other personal interest.

References & Clinical Trial Registry Information: TBemis (tb.kpdata.gov.pk). Access is restricted.

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IS-17. Tackling indoor air pollution (IAP) in urban slums

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Brief Outline of Context: Non-notified slums in Bangalore, India, rely heavily on cooking on traditional stoves (chulhas) with biomass fuels, whose incomplete combustion leads to the release of harmful airborne substances inside people's homes.

Brief outline of what change you planned to make: Project Exhale, a multidisciplinary, multi-stakeholder project, seeks to employ collaborative, participatory methods to explore, develop and implement solutions to indoor air pollution (IAP) in non-notified Bangalorean slums. In doing so, we aim to overcome issues of poor sustainability and acceptability of improved cookstoves (ICS) that have historically plagued such initiatives.

Assessment of existing situation and analysis of its causes: To better understand the causes and factors underlying this issue, we relied on studies and reports by the scientific community and international organisations such as the World Health Organization (WHO), and conversations with people involved in other local projects focusing upon IAP. Moreover, we reframed the problem to fit the context within which we sought to tackle IAP, and explored views and considerations of local communities.

Conclusion: We employed a flexible, exploratory, emergent project design whereby a community of practice, involving researchers from diverse backgrounds, designers, slum inhabitants (end-users), engaged in a community-centred initiative for co-designing an ICS that is tailored to the resources and constraints of the setting. Exploring the results of Project Exhale is an ongoing process which relies on the use of qualitative methods, whereby we assess the acceptability of the ICS and its 'fit' in the context of implementation. We use local methods of assessing, say, soot emission with white sheets that provide visual representations of smoke reduction by the ICS. These assessments are supplemented by a larger randomised controlled trial which aims to study the effect of use of ICSs on respiratory health, by comparing lung functions of households with and without ICS.

Effects of change: By introducing an ICS that has been tailored to fit the environmental and cultural requirements of the people, rather than a one-size-fits-all, external fabricated product, we expect to see an improved uptake and

sustained use of the solution, thereby providing a long-term alleviation of IAP in slum households.

Lessons learnt: Our experiences show that ICS relying only on technical proficiency can fail to account for the multitude of contextual aspects that would constitute an 'appropriate technology', such as cooking habits, perceptions of smoke, space, fuel availability and others. In this line of thought, we learnt that participatory methods can considerably attune the development of the ICS to these aspects.

Declaration of Interest: Project Exhale is jointly spearheaded by Maastricht University and Zuyd University, and is sponsored by Dutch Governmental funding (NWO-STW).

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IS-19. Xpert® *Mycobacterium tuberculosis* (MTB) rifampin (RIF) assay to early diagnose and chase end tuberculosis (TB) targets: an experience in Khyber Pakhtunkhwa Pakistan

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Brief Outline of Context: Khyber Pakhtunkhwa (KP) is one of the Provinces of Pakistan with 270 per 100,000 tuberculosis (TB) incidence rate. Provincial TB Control Program (PTP KP) provides free TB care services to about 25 million local population. There are 230 basic management units (BMU) in public sector and 92 labs linked with 392 general practitioners (GP) enrolled in the private sector across the province. Quality sputum smear microscopy and anti-tuberculosis therapy (ATT) under directly observed treatment, short course (DOTS) strategy is provided by the program. The objective was to detect rifampin (RIF) resistance (RR) and *Mycobacterium tuberculosis* (MTB) in referred cases as per set protocol, and, treat successfully 90 % of them.

Brief outline of what change you planned to make: This was a retrospective study of 3 years 2014 to 2016 whereas, 9 Xpert machines were installed in 2014, 10 in 2015 and 17 in 2016. All patients attending the clinics were referred to Xpert after meeting criteria and screened. All patients were also screened with clinical history; signs and symptoms were recorded and were correlated with the smear microscopy. Those found RR were enrolled for multi-drug-resistant TB (MDR) treatment in programmatic management of drug-resistant TB (PMDT) site. MTB were registered as per DOTS strategy. Those found No MTB detected, were provided symptomatic treatment and health education for the care of patient and personal biosafety. The data of the last 3 years was analysed through SPSS software (V15, IBM Corporation, USA).

Assessment of existing situation and analysis of its causes: From 2014 to 2016, about 20,503 presumptive pts screened, out of which 954 (4.65%) RR cases diagnosed, which were notified to PMDT. About 7,775 MTB (37.9%) cases diagnosed and treated on DOTS. 12,011 (58.58%) pts were MTB not detected and treated for chest infections. About 673 (3.28 %) cases were invalid and having error. There was no significant difference between male to female ratio ($P < 0.05$).

Conclusion: Xpert testing is vital to detect early RR and MTB in a high burden community. Cost-benefit ratio estimation may be done in the local setting. Physicians should be motivated to follow referring protocol and avoid undue referral. Mass awareness and Chest camps be conducted to refer missing cases to Xpert. Declaration of TB as notifiable disease may be tried. Other diagnostics may also be tried to address, high prevalence of primary TB, multi-drug resistant/extensively drug-resistant (MDR/XDR) and TB HIV co-infection.

Effects of change: (i) Xpert ensured early diagnosis of TB patients in the Province of Pakistan; (ii) It may help to increase TB notifications and reduce TB prevalence and thus avert TB epidemics in the near future.

Lessons learnt: (i) Refer presumptive cases as per protocol; (ii) use innovative diagnostics to detect MTB; (iii) declare TB as notifiable disease; (iv) set up

outreach services. Declare TB as a notifiable disease by the Government of KP Pakistan and bind all clinicians to refer cases for notification. Outreach chest camps be held in remote areas to diagnose and treat TB patients.

Message for others: (i) Technology can be used to detect patients (ii) Capacity of all tiers of health staff can be developed to diagnose and treat TB patients.

Declaration of Interest: None.

References & Clinical Trial Registry Information: TBeMIS(tb.kpdata.gov.pk)

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