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Developing health promotion and chronic disease management A remedy for a NHS in a recession?

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ABSTRACT

While use of health services is increasing, the resources available in the NHS remain limited. The health service will only remain sustainable by aiming to prevent ill health. This must be done for those already suffering from chronic diseases and by preventing the occurrence of disease from the outset.

Key Words: health sustainability; health promotion; health reform

Decreasing risk through health promotion

Old age is associated with more ill health and as the population ages this will place a greater burden on the NHS. However many common diseases associated with old age like chronic obstructive pulmonary disease (COPD), diabetes and cardiovascular disease have similar modifiable risk factors.

The World Health Organisation identified these as smoking, unhealthy diet and physical inactivity[1]. Projects have been undertaken to discourage these behaviours and encourage a healthy lifestyle. The Active Schools programme[2] aims to encourage children to participate in more exercise, while the Change4Life advertising campaign shows the 'hidden nasties' in everyday foods[3]. The ban on smoking in enclosed public places has reduced the number of smokers and the health impacts of this are already apparent. In the 5 year period after the Scottish ban was introduced the percentage of the population who smoked fell from 25.4% to 23.3%[4]. However, the influence of the smoking ban is not clear as the figures are in line with a trend of reduction in smoking. In England, second hand smoking in bar workers has decreased on average by between 73% and 91% since the ban[5]. In terms of health benefits, Sims et. Al[6] found a statistically significant reduction of 2.4% in emergency admissions for myocardial infarction after the ban and a similar report[7] found there to be an immediate 4.9% drop in adult emergency admissions for asthma over 3 years.

In the hope of reducing smoking further, legislation is to be put in place in Scotland to introduce standardised packaging for cigarettes. Data from Australia, the only country who has this legislation in place, shows that smokers were 81% more likely to consider quitting at least once a day in the previous week when smoking cigarettes in plain packaging[8]. A systemic review by the *Public Health Research Consortium* showed that standardised packaging makes cigarettes less attractive and appear to be of lower quality[9].

Another risk factor for many diseases is alcohol; it is involved in 1 in every 8 bed days in hospital[10]. A pragmatic approach is being used in London to help to ease this burden: 'Booze buses' help those intoxicated by alcohol without the need for them to be admitted to hospital[11]. A more preventative approach is being used in Fife (Scotland). A mobile alcohol

intervention unit[12] gives advice to youths on reducing alcohol intake. 41% said that they had reduced their alcohol intake after this intervention. On a national scale, Scotland passed an act[13] to introduce minimum unit pricing in June 2012 which will set the minimum unit price as 50 pence. This was not without problems: a petition for judicial review was filed by the Scottish Whisky Society stating that minimum unit pricing is contrary to EU law, not effective in tackling alcohol abuse and punishes responsible drinkers[14]. A later ruling[15] refused the petition.

Evidence put forward by the University of Sheffield[16] suggests that 60 lives will be saved in the first year of a minimum being instated, increasing to 318 by year 10. Furthermore, a Canadian study found that a 10% rise in alcohol cost reduced consumption relative to other drinks by 16.1%[17]. In tobacco similar results have been found with a 10% increase in price causing a decrease in their use by the general population by 4.1%[18].

Early diagnosis

Where disease is present, early detection can reduce morbidity and mortality. This is done through screening programmes that have been shown to be successful:

- 20 years since the introduction of the Cervical screening programme, the incidence of cervical cancer almost halved and the mortality rates decreased by almost two-thirds[19]
- With 12 to 18 years of screening the relative risk reduction in mortality from colorectal cancer is 16%[20]

However, health inequalities limit the uptake of these programmes. The Black report was one of the first reports to bring to light the stark impact of health inequalities[21]. This report concluded that health inequalities were due to social differences in income, education, diet, employment and conditions of work; not failings of the NHS.

Uptake of breast cancer screening gives a current example of this, thirty years on. Goddard and Smith[22] found that people from poorer economic backgrounds use breast cancer screening less due to factors like cost of travel and time taken to attend the appointment.

Levesque et al[23] identified five dimensions of healthcare accessibility: 1. approachability, 2. acceptability, 3. availability and accommodation, 4. affordability and 5. appropriateness. There are projects across the country focusing on each of these dimensions. The Borders Health in Hand website[24] provides health information for those with long-term conditions, increasing accessibility by removing cost of travel and providing the information in the 6 languages most common to the area. This website is part of a larger project collaborating with local workplaces and libraries to increase the accessibility of health resources[25]. As part of this, training sessions are available at local libraries that signpost people to helpful websites.

Improving chronic disease management

For those who suffer from chronic conditions the aim is help them to be as healthy as possible and stabilise their condition. This will prevent unplanned hospital admissions (UHAs) which are distressing for patients and expensive for the NHS. UHAs put a strain on resources by increasing waiting times and disrupting elective procedures, costing the NHS £11 billion per year[26]. Additionally, hospitalisation increases the incidence of hospital acquired infections, pressure sores and leads loss of independence. Covinsky et al[27] found

that 35% of over 70s admitted to hospital decreased their ability to perform activities of daily living.

Purdy et al.[28] conducted a systematic review of interventions to UHAs. They found that in some circumstances education and self-management, exercise and rehabilitation and telemedicine (for example blood pressure monitors[29]) can reduce UHAs. Case management, care pathways and hospital at home were found to either have no effect or increase them. However, these have been found to improve patient experiences and provide cost effective care overall[30].

Croydon[31] piloted the first virtual ward that aimed to reduce UHAs by managing patients in the community. Mr KP (a patient in the study), was referred to one of the virtual wards after an exacerbation of COPD[32]. Once admitted a multidisciplinary team cared for him giving him access to support from nurses, a pharmacist, social worker, occupational therapist, physiotherapist. Additionally a specialist team who work across several virtual wards were available including specialist nurses, the palliative care team and a dietician. The ward provided the default communication point for all services in order to integrate his care. His case manager identified when he became ill quickly, administered antibiotics and prevented a hospital admission.

The structure of virtual wards is such that one virtual ward is linked to 3 or 4 GP practices. Medical input comes through either the ward matron (who leads clinical work on the ward) talking to a duty GP from each of the GP practices every day or by making an appointment to see the patient's usual GP. On a virtual ward there are 100 patients, a proportion of them will be discussed on a virtual ward round every day, another section will be discussed weekly and the rest monthly depending on their circumstances and stability.

The virtual ward project uses risk prediction tools[33] to identify those at risk of future hospital admissions. Other projects have targeted people who have already had multiple hospital admissions. These projects were unsuccessful due to regression to the mean: the improvement would have happened without intervention[34-36]. The most commonly quoted example of regression to the mean, is patients with a common cold. By the time a patient sees their GP, their cold is at its worst and will improve as a result of the patients' immune response regardless of the GPs action/advice.

In the event that an elderly person is admitted to hospital, the comprehensive geriatric assessment can be used. This creates a plan for care basis on their medical, psychosocial, functional and environmental issues. It has been found to decrease mortality and also functional impairment, making them more likely to live at their own homes at follow up rather than at an institution[37]. The use of this approach is not yet widespread, but there is evidence for its efficacy[38].

Self-Management

Self management reduces hospital admissions[39] and allows an individual to actively manage their own illness using problem solving and setting goals. Various projects have been started to support patients through this. The patient passport[40] was developed by people suffering from arthritis for people with the condition. The passport records a patient's medications, changes to their condition and changes in their ability to carry out daily living. This allows patients to take ownership of their condition and so maintaining their independence and dignity. It also facilitates information sharing between health care professionals to improve illness management and integrate services.

The voluntary sector performs many roles which provide vital support to the health service including their support for people who are self-managing. The Co-creating health project[41], developed by The Health Foundation, has been encouraging self-management in people with COPD since 2007. An evaluation of the first phase of this project[42] explored co-delivery of training courses by someone with COPD and a healthcare professional. The courses were for professionals and patients and both groups found that it changed their perception of their role in healthcare. The combination of initial training and long-term support, for example buddying systems, was vital to make self-management sustainable. Overall, this self-management programme improved quality of life[42].

A similar project is the Expert Patient Programme[43]. This course is solely facilitated by lay volunteers. It covers a variety of skills including coping with feelings of depression, relaxation techniques and planning for the future. An evaluation found that it was very likely to be a cost effective alternative to the usual care given to people with long term conditions[44]. It was found to have a greater benefit on health in those with lower self efficacy and health related quality of life[45]. This shows the importance of signposting people to projects which are likely to benefit them most.

The shift from compliance to concordance-based practice is essential for self-management[46]. It encourages patients to be involved in decisions regarding their own healthcare, empowering them to take an active interest in their health whilst respecting their autonomy. Also self-management is underpinned by appropriate use of medicines.

Creating a healthy NHS workforce

Creating a sustainable health service relies on a resilient workforce. The Boreman report[47] explores health worker absenteeism and presenteeism (those at work but unwell, who cannot perform to their full potential). Absenteeism varies from 2 to 6% between locations[48]. The majority of long-term absences are due to acute medical conditions, musculoskeletal problems and mental health problems[49].

Services that actively improve the health of workers increase resilience[49]. The 'Addenbrooke's Life' initiative[47] provides free pilates classes for workers and quarterly health testing days where BMI and BP are checked. On these days advice is given on diet and exercise, amongst other things. A survey carried out showed that 70% of staff rated the initiative good or excellent.

The Boorman report[47] puts forward the business case for ensuring that staff are well: it proposes that a third of sickness absence could be cut saving the NHS £555 million. Creating a healthy workforce will provide better teams who do not have the pressure of working harder due to staff absences. Importantly, the report also highlighted the direct relationship between staff wellbeing and patient satisfaction. Similarly a link was found between staff wellbeing and meticillin-resistant Staphylococcus aureus (MRSA) outbreaks, although it was not possible to say whether the relationship was causal. Franco et. Al[50] also found that better support for healthcare workers leads to better patient outcomes: improvements in morbidity and mortality and increased patient satisfaction.

A major problem for the NHS workforce is 'burnout'. Burnout is generally defined in terms of three criteria: depersonalisation, emotional exhaustion and personal accomplishment. A survey of over 500 GPs[51] was done in 2012 and found that 46% were emotionally exhausted,

42% were depersonalised and 34% had low levels of personal accomplishment. Another survey undertaken earlier this year[52] of 1800 GPs showed these figures had increased to 72%, 41% and 97% respectively equating to 43% that are at high risk of burnout.

A Cochrane review[53] looked in to secondary prevention of burnout and job related stress including stress management training. This involves educating employees to be aware of situations in work that may become stressful and ways to avoid this happening or to relieve the stress should it have already occurred. The review found that long term interventions with refresher sessions may have a sustained positive effect, but further trails would be needed to validate this.

Looking to the future

It is important to remember that currently the NHS compares well to other healthcare systems in the West. A study by the Commonwealth fund[54] of 7 Western countries found that the UK has the most efficient healthcare system, providing good access to healthcare and good quality of care in comparison to the other countries studied. Where the NHS falls short is in patient centred healthcare and in helping to create long, healthy and productive lives.

In order to move forward this information is important: the NHS is beginning from a good place but there are some areas for improvement. To create a sustainable, accessible health service for the future the areas for improvement as well as the successes must be evaluated using an evidence based approach.

Rolling out successful projects must be done cautiously: when targeted at a different population the same framework may fail. It is equally important that the greatest number of people benefit each the project. This involves signposting patients to services relevant to them in the NHS and the voluntary sector.

Health care and social care must work together to create a sustainable model. In the first quarter of 2013 125,410 beds were occupied by delayed discharge patients and a proportion of these are due to waiting for a social care package[55]. In Scotland a bill incorporating the results of a consultation into integration of health and social care is due later this year[56]. This bill will also see the integration of their budgets.

The ageing population is also important to consider. This may burden the future health service in two ways: age related illnesses will create more patients and more worker absences. However, currently health related spending attributable to aging is 1%[58]. The report which found this also described how an aging population can make economies more competitive by facilitating 'morbidity compression' through healthy ageing combined with more people in their 60s and 70s participating in formal and informal work. It found that the productivity of countries with ageing populations could be increased by 10% of GDP in future decades.

Risk factors for illness include lifestyle factors and health inequality. There is a striking correlation between income inequality and health and social problems[59,60,61]. A document by the World Health Organisation[61] describes ten principles for policy action to reduce social inequalities and improve health. Whitehead[62] created a typology to categorise actions that tackle social inequalities in health. The categories involved strengthening both individuals and communities, improving living and working conditions and promoting healthy macro-policies affecting the whole population. Individuals may be strengthened through education

and self confidence building. By acknowledging the positive strengthens of people so giving them the capacity to act in ways that improve health[63]. Strengthening communities allows communities to work together to improve their identified health priorities whilst also building social inclusiveness and a less divided society. This works on the theory that exclusion of people from society denies them their dignity and self respect leading to worse health outcomes[64].

Research and medical advances also remain important in improving health[58]. The morbidity and mortality of conditions like atherosclerosis have been improved by drug advances and whilst others like dementia could benefit from similar advances. However, in the era of multi-morbidity and chronic ill-health there will need to be a focus upon patient self-care and patient education as a method of improving health outcomes as medical magic bullet are less likely to benefit this population.

Conclusion

Therefore there is a great challenge ahead: improving the health of the nation is a complex task involving healthcare workers, current patients and future patients. However the NHS is beginning from a good position: it is efficient and it is innovative. There are many projects taking place that aim to improve health by illness prevention and health promotion. By carefully sharing these projects and encouraging new ones, the health service will be accessible and sustainable into the future.

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