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Ideas from Complex Systems Theory: Peer-led Community Preventive Health for a WHO (2007) 'Whole Prison' Approach to Health

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Introduction

This article is presented following fourteen years of experience with an innovative approach to preventive health in all Irish Prisons. During this period, University-led and internal evaluations have demonstrated increased engagement with prison populations by trained inmate peer educators, linked to formal prison health, psychology and addiction service professionals [1-3].

Peer-led interventions, where individuals with similar life-experiences guide and support one another, have shown promise across various contexts, including substance abuse recovery, mental health, and criminal justice [4]. They have also influenced violence prevention, creating safer prisons for both inmates and staff, reported in earlier evaluations [2,15, 56, 57].

Bagnall et al. conducted a systematic review of the effectiveness of peer education in prisons, finding significant benefits in enhancing participants' health knowledge and behaviors -suggesting that these interventions can play a critical role in the holistic health and rehabilitation of offenders [5].

The Community-Based Health in Prisons programme is a global International Red Cross Community Health and First Aid programme operated in wider agricultural and urban communities, linked to local health centres in over 120 countries [2, 56, 57].

To adapt this programme, a partnership was developed between the Irish Prison Service, the Education and Training Board of Ireland and Irish Red Cross. This created the first prison globally to bring Red Cross volunteering as inmate peer educators into this context. It recognized that prisons are as much a community as any other, within the wider community [59, 60].

In this context we can recognize a prison being a 'neighborhood', a landing as a 'street' in which there are cells as 'households' with individuals within them as temporary inhabitants [2, 59, 60].

Within each prison, a multi-disciplinary approach to the training and management of these peer educators as Red Cross volunteers was used, thus supporting the WHO Whole Prison approach to community-based health [6].

It was implemented as an innovative Preventive Health change management strategy designed to transform prison health from the existing reactive model to a preventive and proactive culture that more effectively engaged with the whole community of prisoners and staff to improve health, wellbeing and safety. This strategy will be explored within this paper.

Illustrated examples of community-based health and wellbeing projects implemented by peer educators with their communities are included.

Preventive Health Programme and its Design

'Prison is a terrible place to deal with a serious ailment' [7]. For others who enter prison relatively healthy, they describe prison as a reasonable place with access and opportunity to maintain general health. Globally, over 11 million people are imprisoned, but expectations are far inferior to Western European prisons.

This paper is concerned with a systems theory model of prison health in Ireland which has used an innovative peer health education approach linked to prison health systems [8].

The design recognizes the complexity of individual human 'systems, the context of which Bateson (1975) implies that 'there are only relationships'. This has led the author to consider educational approaches that focus on the process of learning and relationships in thinking about sustainable preventive health in prisons [9].

Through a partnership with the Irish Red Cross, Irish Prison Service and Prison Education established in 2009, prison inmates have been trained as peer-health educators and known as Red Cross volunteers. These operate in all Irish Prisons linked to formal healthcare systems.

The paper will begin by explaining the peer education programme content. The exploration of the process of the training and implementation is more complex. The author will discuss how complex systems, their subsets of complex adaptive systems and chaos theory have been harnessed in its design within an Action Research framework. This has contributed to social and organizational transformative learning in preventive health over sixteen years [10-13].

The paper provides some examples of peer-led preventive health initiatives contributing to a WHO (2007) 'Whole Prison' approach to preventive health. Research studies and evaluations have also demonstrated positive personal change in those prisoners participating as peer educators [14,2,57].

This Irish model has been replicated in other jurisdictions through Irish training and support. Evaluations in Norway and Australian pilot projects have identified similar personal positive change in inmates undergoing Red Cross peer educator volunteering [56]

Whilst in-depth recidivism studies are needed, qualitative findings of evaluations suggest a potential for future desistence [16, 25, 26].

The Peer-Education Red Cross Volunteer Training

The training programme follows an International Red Cross Curriculum of Community-Based Health and First Aid.[58] This was adapted by the author in 2009 to the prison context.

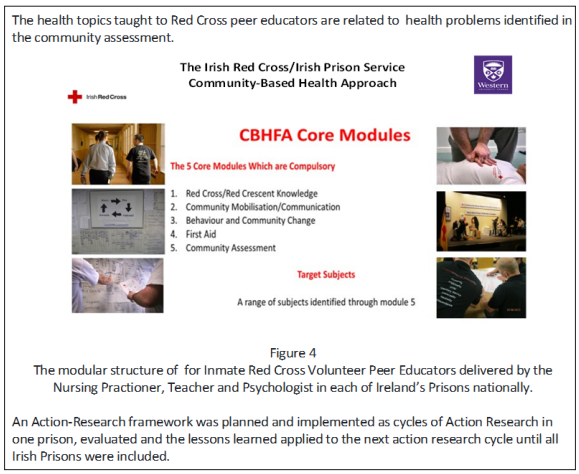


Figure 1: The Generic Modules of Community Based Health & First Aid

Learning in the Classroom, Action in the Community

Community-Based Health in Prisons has been demonstrated to work through focusing on both the 'content' and 'process' of learning and action in the community. Through this dual focus, learning and community action, has led to improved access to health, wellbeing and safety knowledge, whilst also developing inmate personal development, empowerment and self-confidence [15]. According to Perrin & Blagden, peer support roles amongst prison inmates may also contribute to desistence post-prison [16].

The programme was designed and implemented within an Action Research Framework and utilized complex systems theory and its subsets of complex adaptive systems (Dooley 1997). In addition, elements of chaos theory are characterized by the co-existence of both order and disorder within its context [17-19].

Here, the behavior of the whole system (the programme and all its connecting parts) reflects the starting position of the system (in all its parts). This will be explored later in the article as they have been critical factors in maintaining effective and balanced programme effectiveness

The process of the approach is concerned with how the programme (content) is facilitated and managed. This influenced the rationale for a 'realist' approach to evaluating the effectiveness of the programme cycles. Such approaches are well-suited to sociological and educational research. Realist evaluation research asks the question: What is it about this programme that works, in what context, with whom, how and why?'

Thus, in the 'Realist' evaluation, the structure of the hypotheses that underpin program theories is organised as three key elements of Pawson & Tilley's context-mechanism-outcome (CMO) [20].

These describe the conditions (context) within which the program is embedded that activate generative processes (mechanism) to produce behavioural, social, or cognitive changes within the participants (outcome). Since the programme theories also hypothesize about complex adaptive systems and a 'whole prison approach' to health, these outcome changes are not limited to volunteer participants alone. Indeed, evaluation data show positive changes in staff recognizing the value of the peer-education programme, through healthier and safer working contexts [57].

Within this paradigm, all parts of a system interact and changes in one part of the system create changes in the entire system. Chaos theory further propose that changes in the starting conditions of a programme, have the potential to create significant change to the whole system (Prison health).

The Theoretical Underpinning of the Programme

The 'realist' evaluation studies identified the following processes to be centrally important in maintaining the effectiveness and longevity of the programme:

The WHO (2007) Whole Prison approach to health in Irish prisons has been centrally important, and the Programme has assisted in embedding a 'whole Prison' approach in Irish Prisons [21-23].

Previously, a Health Care Audit of 2008, indicated a somewhat siloed structure between services and professional disciplines [24]. There was a lack of the matrix relationship that developed through the establishment of the multi-disciplinary Community Health Action Committees (CHAC) in all prisons. These were necessary to facilitate the Community-Based Health Peer-Eduction programme in 2009.

Peer-to-peer education is central to the uptake of health and wellbeing messages amongst prisoners and there is evidence of this in the data of evaluations. and some published papers [25-27].

Action Research and Participative Inquiry

The programme was designed within an Action Research framework, utilizing peers engaging in participatory learning and action as co-researchers.

This has been an important methodological approach. identified through interviews in evaluation studies conducted in partnership with University of Western Ontario, Canada School of Public Health. These support earlier cycles of internal action research evaluations [2, 57, 59,60]. The approach supports findings associated with volunteer peer educator empowerment, increase in motivation and personal development reported in evaluations.

Volunteers and the prison communities are engaged in the community assessment process in Community-Based Health Prisons and therefore in the decision-making about the appropriate health project activities, along with professional key informants.

The assessment module is conducted prior to joint student-teacher construction of the learning course, focusing on the target subjects identified. Peer-educators engage with their communities and then design practical projects or campaigns under the supervision of

teachers and relevant professionals.

In this way, they become co-researchers with the programme staff. It is like the notion proposed by Heron & Reason, where co-inquirers engage in 'experiential knowing that gives them a participatory view of the world' (p.369) and in this case, their own prison community. This contributes to personal and organizational growth [28].

Complex Adaptive Systems

These are a subset of systems theory and are concerned with understanding how complex systems operate in conditions that are both orderly and chaotic, and, how they can be navigated. Van Eijnatten, (2004) coins the phrase 'chaordic' implying the co-existence of both in organizations.

According to Neuman (1954) the universe and all free systems have the tendency towards entropy. This means organisation will inevitably move towards disorganisation. Feedback systems implied in Complex Adaptive Systems and Cybernetics delay or correct action towards entropy.

Whilst the field of complexity has historically been concerned with the sciences, much attention has been focused in recent years in the areas of education, health and social sciences (29-32).

In their paper, Gladwin & Ellis consider adopting systems literacy as a comprehensive educational approach to navigate complex systems. The author began such applications of theory into learning design for community disaster preparedness, risk reduction and community health using the transformative model shown in figure 2. [33- 35].

The goal of Community-Based health in prisons is to provide effective community-based health, wellbeing and safety, linked to formal health systems. In addition, the model uses members of the community (peers as inmate Red Cross volunteers) that are supported by different disciplines of staff and accepted by the general prisoner community.

In addition, this needs to be managed within the natural order of prison life, the unpredictability of chance events (disorder) and the complexity of individual people. Mkhitaryan (2003) maintains that chaos and order are also part of human experience [61].

Experience over fourteen years of action researching and evaluations have demonstrated the essential multi-disciplinary Community Health Action Committees (CHAC) in each prison as a key structure to the successful operation of the programme.

CHAC meetings occur in all prisons monthly with participation by prison management, nursing, psychology, addiction services, prison education and representatives of Red Cross peer-educators.

These multi-disciplinary meetings act as regular planning and feedback mechanisms, which are critical in ensuring goal-orientated action. They form the regularly occurring 'adaptive' part of the complex adaptive system of the Irish Community-Based Health in Prisons Programme. A model of this programme management structure is shown in figure 3 as a complex adaptive system metaphor. It is a mechanism that challenges the natural tendency to entropy.

The Living through Time Change Model has been a central process component of the Community-Based Peer -Education Program in Prisons since its inception in 2009. It is a change model derived from an earlier linear model developed by Dilts. As a systems model, this is shown in figure 2.

The connectivity implied in these models between all parts of the system (hexagon) is that changes in one part of the hexagonal metaphor may lead to changes in all parts and therefore the whole of the system.

Such changes have been explained by Lorenz as the butterfly effect where 'the fluttering of a butterflies wings in Tokyo has the potential for a hurricane in New York' [10]. Whilst metaphorical representation may refer to chaos theory in weather systems, the same principle can be demonstrated in socio-educational contexts and supported by the author's fourteen years of experience with this programme.

The examination of interview data in evaluations from inmate volunteers indicates a striking resemblance of the 'butterfly effect' in the qualitative language structures used in evaluation interviews. There is evidence of increased motivation, confidence and self-esteem [56,57].

A mixed methods study by Foy (2020) included quantitative psychometric measures taken with peer educators at time 1 (Beginning of training) and time 2 (end of training). These studies showed statistically significant improvements in mental health and self-esteem. A collation of both qualitative and quantitative data also suggested a degree of changes in locus of control, though there was not statistically significant quantitative evidence.

The time metaphor superimposed on the hexagonal metaphor of figure 2 suggests the potential movement of volunteer, community and organizational learning. This may be influenced by the experience of Community-Based Health peer education programme.

The model has been used in the programme as a means of assisting participants to realize changes in their own thinking about possibilities of positive changes in health and wellbeing, personal development and motivation. Bandler & Grinder investigated the use of language as the way we construct our view of the world. They propose that we can enrich our world by widening the choices available to us through reflecting on our experiences [37, 38].

Building on the work of Bandler & Grinder, the model in figure 2 was used by the author as a guided reflective learning tool, facilitating personal recognition of changes in volunteer peer educators themselves over time. Reflective interviews can facilitate the breaking down of experiences into the separate levels of how the volunteer experiences their (1) environment of living, (2) behaviour, (3) capabilities, (4) beliefs and values, (5) identity, and (6) goals [60].

Interview data reflecting on how each of these six levels were experienced before and after six months of peer educator training and community action was illuminating. There were changes in language structures reflecting 'being less empowered' or at 'effect' at time 1 and then later (at time 2), to feelings of 'empowerment and being at 'cause' [60].

It suggests a richer view of the volunteers' world of prison following six months of volunteering experience. It may signify the realization of more choices about self and others that surface when we are at 'cause' rather than 'effect'.

The change in language structures over time may have significance if we accept Chomsky's assertion that language is overwhelmingly the best evidence of the nature of the mind. Linked to this Plotinus writes that the spoken word is an echo of the thought [23,50].

Explaining Community-Based Health in Prisons Through Models

Central to understanding how the content and process of the programme create transformative learning are the two models on which the programme was developed (figures 2 and 3 below). The Community-Based Health in Prisons approach was derived from a linear model proposed by Dilts and reconfigured by the author, as a systems model (figure 2) [54]. In these, changes in one part of the system lead to changes in the other parts of the system. Dilts' logic suggests that if individuals change to healthier behaviours, they increase their capabilities and their environment of living improves. Recognizing these changes, may change beliefs and values, identity and personal goals may change.

According to chaos theory (a subset of systems theory), the initial conditions may affect how the whole of the system performs in relation to the whole of the system. This is reflected in figure 3, which illustrates the multi-disciplinary team that supports Community-Based Health. This regularly occurring meeting (CHAC) ensures timely adaptations for effectiveness of learning and action in the community [54].

The importance of maintaining the balance of this multi-disciplinary model is self-evident. The inter-connecting lines between each of the parts of the systems represented in figure 3, are metaphors for the flux of balancing the parts of the programme managing system. Therefore, operational weakness in one or more parts of this multi-disciplinary system, communication falls short.

Evaluations have identified such systems breakdown in peer educator support. It leads to de-motivation and reduced preventive health outputs in the community in prisons concerned. Conversely, evaluations demonstrate that an initial dedicated and well-balanced multi-disciplinary management model, creates high motivation and project activity output. This is an example of applied chaos theory. where the starting conditions of the system (the Programme), reflect the increased productivity of the system.

Thus, the models reflect both the personal and community change (fig 2) and programme management (fig 3) strategies. Action researching in Irish Prisons have supported transformative change and longevity of in community preventive health through a systemic relationship between the 'parts' and 'whole of the system.' by countering entropic disorganisation of the system [54].

The presence of the arrow in figure 2 suggests the mechanism for changes in thinking of peer educators and their communities over time. In figure 3, the arrow and the feedback loops are a metaphor of the Complex Adaptive System through time as the mechanism for the effective management of the peer education system.

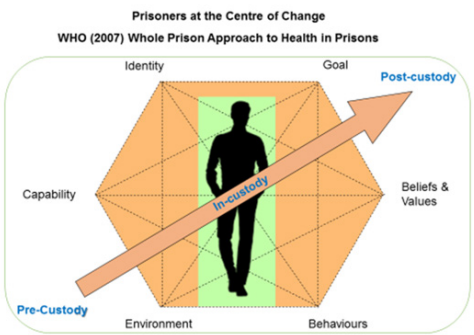


Figure 2: Personal & Community Change Model Changes in one part of this system lead to change in the whole of the system.

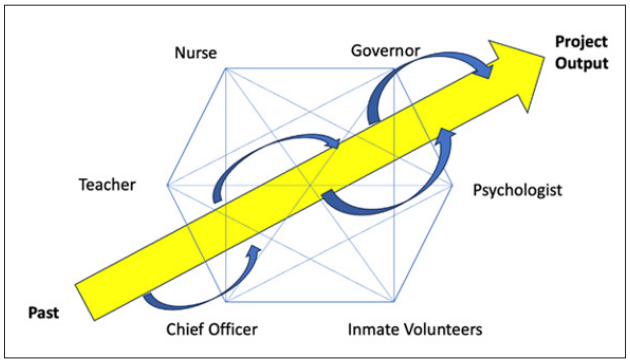


Figure 3: Complex Adaptive System (vision on which the peer education model is organized.
Starting conditions affect the Output of the system (chaos theory)

Hughs in Reason and Bradbury maintains that action research has a special position in relation to complex adaptive systems. Within its iterative features, there are numerous parts that need to adapt to change (see figures 2 and 3). Patterns may emerge from the interaction of the parts in chaotic systems, resulting in unexpected changes and the potential emergence of new and different solutions [39].

Fuentes proposes emergence as one of the central concepts within systems thinking as it describes a universal process of becoming or creation. It is a process whereby novel features and properties emerge when we put elementary parts together as they interact and self-organize to create new patterns of organization [40].

A Collection of Health, Wellbeing and Safety Preventive Projects Within Prison Communities Facilitated by Inmate Peer Educators Supported by Professional

Following discussion on the importance of the processes for transformative community learning that has occurred in Irish Prisons, a limited collection of preventive health initiatives implemented by Red Cross peer educators linked to formal health systems is presented. Projects in all prisons each year reach up eighty over fourteen prisons, Therefore, only a selection is presented here.

Mental Health Wellbeing

According to the Centre for Disease Control 'mental health is a global public health issue' with WHO concurring that 'mental health is public health' [41].

Mental health wellbeing in Irish prisons has been consistently identified as the top issue cited by the prison inmates during the community assessment modules in all prisons. This has been supported by professional health and psychology staff as key informants.

To address some of the mental health and wellbeing issues at community level, a partnership was established in 2016 between the Prison Service Psychology Service and the Red Cross Peer-education volunteer programme.

The strategy supports the Psychology Service's aim to better engage with local prison communities with wellbeing activities in addition to their forensic psychology and one-on-one clinical support. Peer-education was seen as an initiative-taking approach to widening the scope of the Psychology Services in prisons. Inmate peer-educator activities in each prison are led by a dedicated assistant psychologist to ensure effective supervision

Part of the role of the assistant psychologist in each prison is to support the inmate Red Cross volunteer peer educators in their training and community project supervision.

Each year, a community mental health wellbeing survey is conducted with all inmates in every prison. The purpose of this survey is to achieve three objectives:

- To identify the top three issues related to mental health wellbeing, affecting the prisoner community.
- To engage with the community in a way that acknowledges the mental health wellbeing concerns within each prison community.
- As an extension of the psychology service, volunteer peer educators can demonstrate to the community that action is delivered following the consultation with them.

The diagram in figure 4 below, provides an example of the findings from a community survey of inmates in one prison, thus feeding back to the community the findings affecting their community.

The assessment outcomes lead to the selection of the two issues with the highest percentages of concern. In consultation with the community and the assistant psychologist, awareness activities are designed to be facilitated by peers with their communities.

Following classroom instruction, peer educators collaborate with the psychologist to design a simple community project to engage the community in activities that help address mental health wellbeing in the chosen topics. The same process is used in all prisons in Ireland linked to an allocated assistant psychologist.

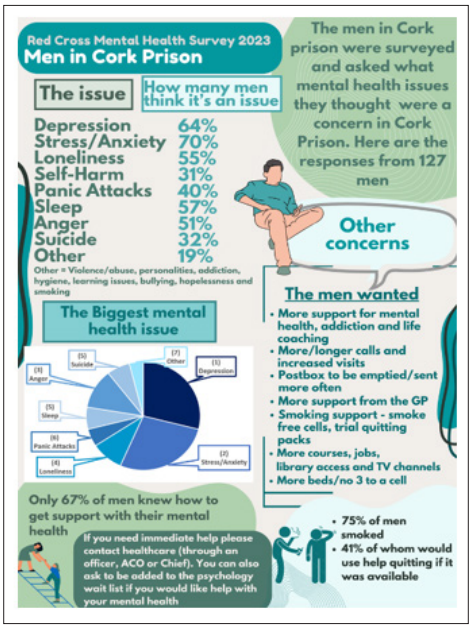
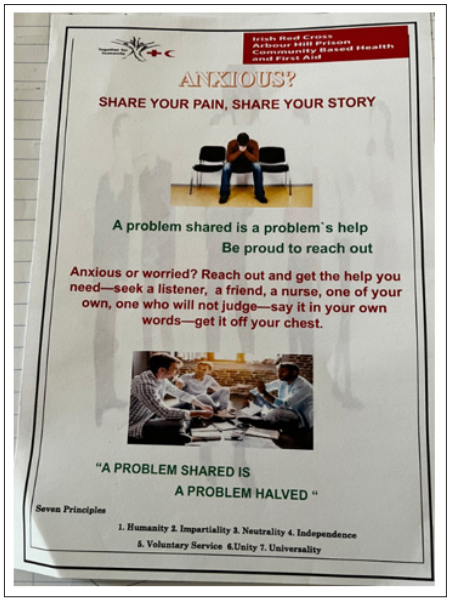


Figure 4 (above): The Poster representation of the Outcomes of the mental Health Wellbeing Survey undertaken by inmate Red Cross volunteer peer educators with their community with analysis support from the attached assistant psychologist.

The role of inmate peer educators is in raising mental health awareness and restricted to:

- Information dissemination and
- Being available to listen and sign-posting of community inmates to professional psychology or healthcare professionals.

Great care is taken in collaborating with peer educators to be aware of their limitations as volunteer non-professionals. They do not provide professional advice.



Reflecting on Mental Health Wellbeing during the Covid 19 Pandemic

The Irish Prison Service National Infection Control Team was a leader in Infection Control during the Covid 19 pandemic with one of the lowest infection and deaths rates globally (Clarke et al 2022) [64].

However, after action review of Pandemic effects on prisons, indicated high impact on the mental health and wellbeing amongst prisoners.

The activities of the Red Cross volunteer peer educators have been credited in assisting with mental health wellbeing through the contact they maintained with the isolated, through Perspex windows.

This was important as professional staff such as psychologists were only available remotely by phone. Volunteer peer contact was used to ensure problems were addressed through providing information in simple ways and alerting psychologists as required.

Suicide and self-harm rates are high in prisons globally even before the Covid Pandemic. In addition, imprisoned people already have a high burden of mental health issues and substance use and the withdrawal of some professional services to remote systems compound the risks [42].

In Irish Prisons, as in all others, the sense of isolation through the cessation of visits resulted in frustration, anxiety and poor mental wellbeing. The support provided by peer educators Red Cross volunteers in all prisons through the pandemic provided access to some peer emotional support [2,57].

According to the Irish Prison Service, the real value of having Red Cross peer educator systems already in place and functioning before such an emergency was particularly recognized during the preparedness and response to the pandemic.

Prevention of Drugs Overdose

In common with Irish Prison Service Health, the Red Cross Community-Based Health Pein Prison Peer-Education Programme has a focus supporting the Irish National Drugs Strategy 2026-29, collaborating closely with established community Addiction Services Austin et al Avril et al [43].

Austin maintain that people who use drugs are over-overpopulated in prisons and that a third of people in prisons take drugs. Avril propose evidence that in European prisons the figure may be 24-45 % are using some form of illicit substances before entering custody [22].

The problem of illicit substances in prisons in Ireland is widespread and poses a significant risk of death from overdosage.

A well-documented complication of drug use with People Who Inject Drugs (PWID) is their susceptibility to HCV, HIV and other diseases linked to often poor lifestyles of PWID. This is why the Irish Prison Service and the Red Cross Programme take a Harm Reduction approach to keep prisoners as safe as possible and avoid the tragedy of deaths in custody.

Overdose Prevention strategies are used, and all Red Cross inmate volunteers receive this training. Volunteers are also trained as peer-Facilitators of overdose prevention workshops which they then regularly provide in all prisons. The workshops include practical first responder training in managing the unconscious or comatose person because of drug intoxication [57].

This life-saving procedure performed by Red Cross inmate volunteers ensures that the airway is clear and protected until health staff arrive on scene. Over the history of the CBH in prisons programme, a considerable number of lives have been recorded as saving lives in these immediate circumstances.

Nalaxone therapy has always been available in prisons in injection form for use in emergencies by nursing and medical staff. However, a joint project between the Irish Prison Service, Community Organisations, UISCE and the Irish Red cross was launched to create awareness amongst prisoners that a nasal application can be prescribed for at risk prisoners on release from prison.

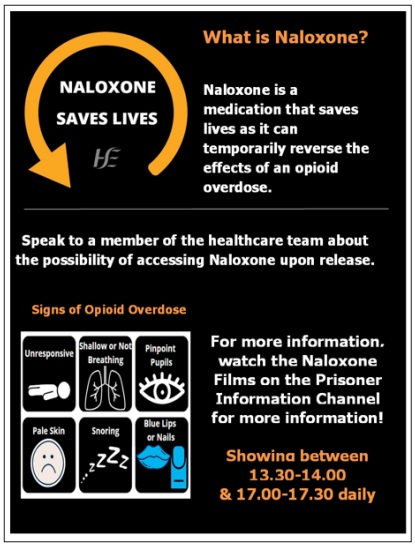


Figure 6: The Nalaxone Project

Films produced provided signs and symptoms of Overdose and crucial information about Naloxone, which reverses the effects of an Opioid Overdose.

A prescription for Naloxone can be given to prisoners who may be at risk of Overdose as part of their release plan and these films will provide the information needed to access it. Volunteers assisted in the development of the film script and served as the film actors.

Peer educators were also utilised by the media unit to provide the voiceover for the films that are shown on in-cell televisions. It is anticipated that the awareness raising of the film will result in more prisoners accessing Naloxone upon release and thus, reducing their risk of a fatal Overdose.

The effectiveness of this project will be the focus of future evaluation in partnership with community organisations.

Staying Alive at Christmas Campaigns

Holiday periods such as Christmas time are always regarded as a high-risk period for increased illicit substance abuse and therefore of deaths from overdose. As a result, a Staying Alive at Christmas campaign is conducted in all prisons in the weeks leading up to the Christmas every year. This campaign includes awareness raising amongst prisoners' families in the visits waiting areas and entrances to focus on Keeping THEM Alive at Christmas.

Figure 7: Staying Alive at Christmas Campaigns

Emergency Response Drug Awareness Campaigns

This includes Volunteer-led Emergency Response Awareness campaigns when healthcare receives warnings about an influx of particularly potent or dangerous illicit preparations.

Figure 8: Emergency Response Peer Educator-led Drug Warning Campaign

In one prison in 2023, a drug warning was received about a particularly lethal illicit substance likely to enter the prison.

The Red Cross nurse briefed the Red Cross peer educator volunteers and prepared a simple cell drop poster warning prisoners of the danger of this drug and how to identify it. This emergency response was implemented within two hours.

The result was that four prisoners gave up their supply of these drugs because of the campaign. It is highly likely that lives were saved through this response.

It is also a testament to the respect and credibility that prisoner populations have for inmate Red Cross volunteer activities, as drugs would not normally be given up any other way.

Another example of the effectiveness of Volunteer-led Emergency Drug warning responses has been demonstrated with influxes of New Psycho-active Substances (NPS). These are not only a risk to life but create severe behavioural difficulties which, in multiple simultaneous cases can also threaten the security of a prison.

Peer-led prison community campaigns resulted in prisoners outlawing this type of drug in their community themselves, amongst their peers.

Preventing and Reducing Prison Violence

Drugs and violence are key problems in prisons and are often inter-related. In addition, prisoners themselves recognise the constant threat of violence whether physical or psychological in terms of bullying culture and power struggles. Edgar cited some research in which 89% of prisoners interviewed regarded that violence in prison to be inevitable (Edgar et al. 2003).

Other prisoners believed that a failure to be seen as 'standing up' for themselves when challenged by one inmate, risks being victimised by other prisoners. Edgar also suggest that 'conflict riddled' prison communities generate a perverse cycle in which rational individual responses to danger increase the risk within the prison.

Examples of this have been experienced in some prisons where such an out-of-control spiral of cutting-weapons being held by a large proportion of inmates, led to a culture of perceived danger in which whole prison communities were tense.

Violence and Conflict in Prisons

In a unique approach to breaking this cycle, inmate Red Cross volunteers proposed a unique project to prison management. Through the Programme's monthly multi-disciplinary management meeting, a 'weapons amnesty' was proposed as an approach to reducing illicit weapons in their community. This project was only possible for several important reasons:

- The respect afforded to inmate Peer Educators as Red Cross volunteers within the prison community and amongst staff.
- The ability of some high-profile Red Cross volunteers to instigate 'talks' between potentially conflicting groups was essential. Only they were able to broach the subject of giving up weapons in a controlled group for group fashion. It could not have been achieved by any kind of staff interventions.

- It is not unlike the confidential negotiations that are engaged in at conflicting party or even country level.
- The fact that this project was planned and instigated under the accepted international rules of impartiality, neutrality and humanity played a key role, even at this local prison level as part of the national programme.
- The willingness of prison management to support the project and provide assurances of no punitive action for the surrender of weapons in the agreed seven-day amnesty period.
- In terms of a collaborative community effort, the buy-in from high profile leaders in the prisons was incredibly positive to reducing both weapons and tension in the prison.

This violence prevention project in overcoming barriers to find new ways of solving conflict problems is unique. It required a 'whole of Prison' approach to implement Red Cross Fundamental principles of humanity, neutrality and impartiality have become embedded in prisons, through the selfless actions of prisoners wearing the Emblem with pride [2, 56,57]

The outcome of this example showed that before the Weapons Amnesty, 98% of all attacks, Prisoner on Prisoner, were with a cutting weapon. In the three months after the amnesty project, the statistics showed that only 6% of attacks involved a cutting weapon.

In addition, there was an overall 50% reduction in all violent attacks (Abiodun et al 2025).
Evaluation, including interviews with previous prisoners to this prison, stated that they did not recognize the safer environment in a community, which they previously experienced as dangerous in this prison. The effectiveness of this project led to its replication in other prisons in Ireland.

Figure 9: Examples of home-made Cutting Weapons (shivs) Collected in the Weapons Amnesty Project

Anti-Bullying Campaign

Bullying in prisons is another form of nonphysical violence which can be highly distressing to the vulnerable in prison. According to Kimmett this is a widespread issue in prisons where individuals gain dominance over others. The purpose of bullying can be to obtain items from other prisoners' property. It can include bullying for food, drugs, and pressure on others to smuggle drugs whilst on hospital visits [44].

Peer educator Red Cross volunteers recognized this issue in one prison and decided to provide community opportunities to reduce bullying by empowering inmates with tools to say no to bullying. The project involved peer educators talking to other inmates to seek out successful strategies from subjective experiences.

A filmmaker was engaged by the prison school to design with the peers a film of three scenarios that demonstrated a useful, non-combative way to say no to bullying for food, drugs and the bringing in of illicit drugs.

Whilst prisoners could not take part in the films, actors were briefed by inmates on how to act out prison language and behaviours for these scenarios. The completed films were used in all prisons on the in-cell TV systems.

Other strategies have included the agreed the establishment of 'safe places' where all prisoners understand that bullying, violence, and conflict are outlawed. These included prison libraries and schools.

Bullying is also seen in women's prisons where essential and personal health products are bullied for. Red Cross volunteer peers conducted a campaign to raise awareness about these items that are freely available from Healthcare or Prison Officers.
This removed the reason for such items to be obtained by coercion of others through bullying

Figure 10: Ant-Bullying Campaign Creating Awareness of Item Freely Available

Promoting Social Inclusion in Prison Communities
Social inclusion is an important strategy in both maintaining prison safety and in reducing mental health-related issues in prisons. In their study, Matias describe the importance of family ties, peer networks, and community organizations in fostering successful reintegration while addressing gaps in resources and systemic challenges in prisons [45].

The 'Meet & Greet' Project is one of the most important projects in reducing the anxiety, stress, and confusion of initial imprisonment. Red Cross Volunteers meet with new prisoners to be-friend them, give basic information, orientation, facilities, regime timetables, prison and school information. This provides an important initial support to often frightened new inmates.

Follow-up interviews with prisoners in receipt of this service have described it as 'lifesaving'. It would appear from interviews with new admissions to prisons that the greatest mental health issue is the sudden transition into the prison environment without any knowledge of what to expect.

This is magnified significantly for new persons entering the prison system for the first time. The type of comments include:

"I was totally disorientated – then to have somebody come to me with a smile and wearing a T shirt with the Red Cross emblem, I was so reassured!."

"This person, who didn't know me but said I am an Irish Red Cross volunteer and here to help you, She was so friendly and understanding of my fear and confusion, I almost broke into tears!."

Sharing and caring Project in the Women's Prison
A popular project that brings the community of women together is the communal knitting projects. These items are donated to worthy causes.

Figure: 11

Projects undertaken in the 2021-23 period have contributed to the social inclusion and mental health wellbeing components of the Community Based Health in Prisons curriculum and community action. It acknowledges the multiple nationalities, and cultural differences present in Irish prisons and has been a central focus of Red Cross volunteer activities which seek to build a cohesive society.

Social Inclusion in the Women's' Prison
The Female Red Cross volunteers in the female prison focused significantly on social inclusion within their community with various relevant projects.

Figures 12 and **Figure: 13**

The Knitting project and exercising together promotes community spirit whilst also contributing to healthy living and mental health wellbeing.

Period Poverty Project
Recognizing that some women have limited resources, Red Cross volunteers and prison management established a supply of essential period items that could be supplied to women in need. This was a sensitive subject and the idea of poverty, something that women themselves may not want to admit.

Therefore, this project was undertaken in the most sensitive way and appears to have been an essential and well-received project.

Infection Prevention and Control
The important partnership of the prisons programme and the National Infection Control Team, set up in 2017, has been critically important in improving infection prevention and control at the local community level, linked to operation services.

During the Covis 19 Pandemic, the Red Cross peer education programme in partnership with the Infection Control set up a world class system of prisoner, staff training. For the Red Cross Prisons programme, this builds on the award received from WHO for Best Practice in Public health [46].

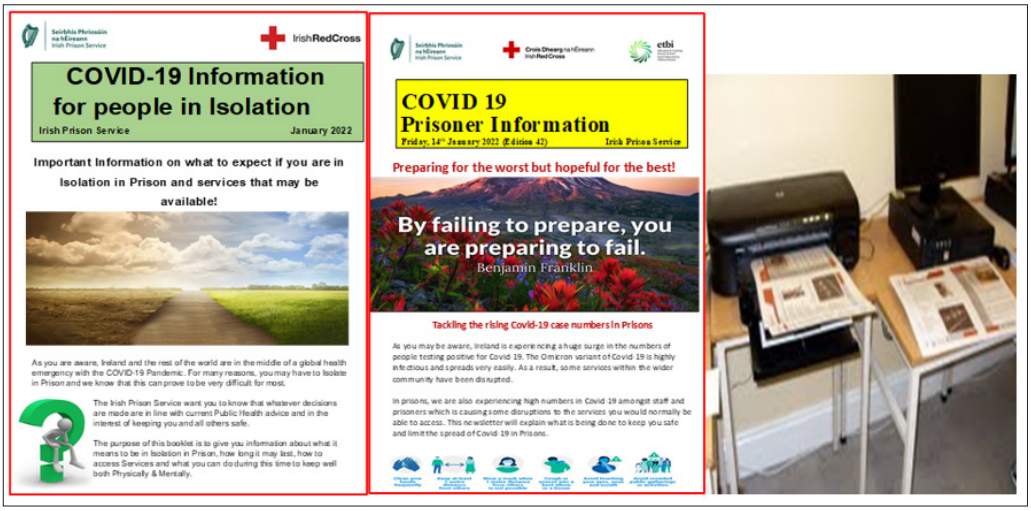


Figure 14: Keeping inmates well informed through cell drops of Red Cross Newsletters

Throughout Covid 19 Pandemic, Weekly and later bi-weekly newsletters were prepared (figure 14) by a multi-disciplinary team, where Red Cross information Letters were prepared and delivered by Red Cross volunteers. The purpose of these was to keep prisoners aware of changes in Covid regulations and how it affects prisoners. They were also used to offer health and well being information.

Good Hand-washing techniques have remained a constant activity in all prisons with volunteers demonstrating using the Glow Box with inmates at landing level to keep awareness and safer practices throughout the Pandemic (see figure 15).

Figure 15: Maintaining clean living environments using colour coded mops and buckets of the flat head mop system contributes to cleaner and more hygienic environments in the prisons.

The peer educator volunteers were active in advocating for vaccination and contributed to the quashing of fake news information about the vaccine's safety. The vaccination rate amongst all prisons reached 70%.

Figure 16 and **Figure 17**

Inmate RedCross volunteer mobilisation to encourage Covid 19 vaccination uptake

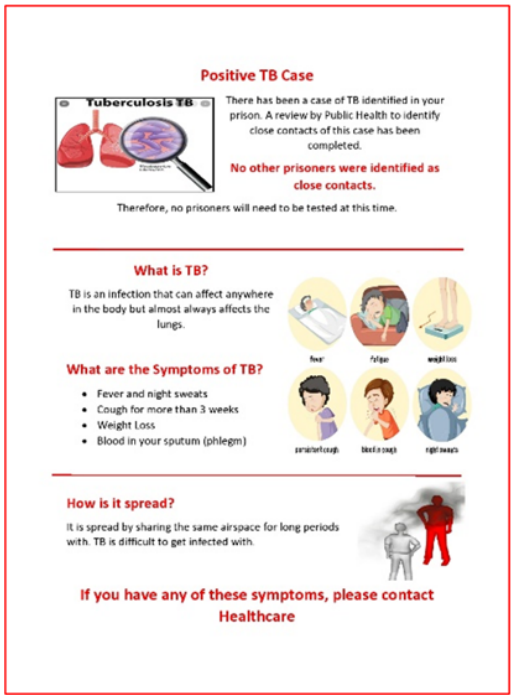


Figure 18: Information poster created by peer-educators and approved by Healthcare

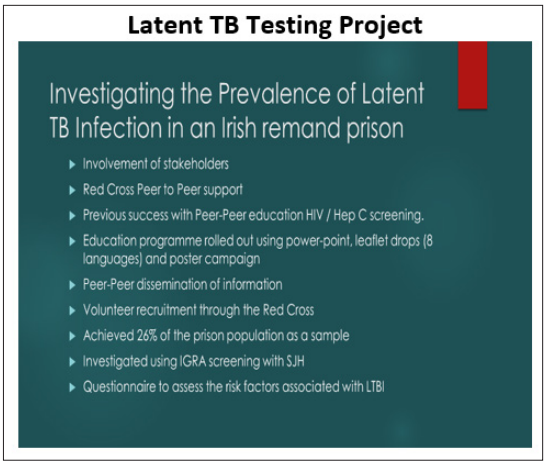


Figure 19: Inmate Red Cross volunteers in remand prison were central to awareness raising and advocating with their peers to attend for Latent TB testing. Phillips [47]

According to WHO, the burden of TB in prison populations is ten times higher than the general population. Whilst cases of open TB are relatively rare in Irish Prisons, occasional small outbreaks occur, especially in remand prisons which are dealt with by an effective national infection control team.

Since all prisons contain large numbers of people in confined spaces and remand prisons have a high turnover of prisoners, the community-based health in prisons programme community assessment module highlights the need for vigilance.

The infection control and diseases module include TB awareness for peer-eductors. They conduct awareness campaigns in the community. They are also aware of the common potential signs and symptoms of coughing for longer than three weeks, night sweats, heamoptysis and chest pain. Their role amongst the commuity, whilst not creating alarm, is to encourage nurse consultation urgently.

The Prison National Infection Control Team planned a Latent TB Testing campaign in the remand prison. This was to identify any prisoners who may have latent TB which has no signs and symptoms, nor is infectious. However, there is the potential for latent TB to become active.

The role of Red Cross volunteer peer educators in this project was to actively raise awareness and advocate for clinical testing for Latent TB. Enthusiastic peer-to peer advocacy led to significant numbers of inmates attending for testing. 9 cases were offered treatment.

Preventing Hepatitis and Advocacy for Screening in the Community

During 2022/3, Hepatitis C screening has been developed in Limerick and Cork prisons building on previous multi-disciplinary experience and Whole prison approaches used in Dublin prisons. Through a funding agreement with HSE, the IPS NICT are recruiting a Hepatitis nurse specialist to develop nation-wide HCV testing who will work closely with IRC inmate peer educators in each prison [27].

It builds on lessons learned from mass HIV testing in three prisons in which the advocacy of volunteer peer educators resulted in up to 60% testing rates. In another project, IRC volunteers as part of a 'whole prison approach' contributed through their advocacy to an 80% attendance rate for HCV testing in 2017 [48].

Figure 20: Viral Screening for Hepatitis C Project

This project identified 17 new cases of HCV which were subsequently able to be entered into curative treatment plans. Subsequent cost-effectiveness studies by the University of Bath, UK identified significant societal cost savings through this initiative [48, 53].

Preventing Non-Communicable Diseases (NCD)

Figure 21: Education Support Groups

Non-communicable diseases (NCD) are recognized by WHO as the greatest health threat to human health and this is mirrored in prison contexts. Chronic lung diseases have been linked to smoking tobacco which is widespread in prisons.

The activities of the CBH in Prisons Programme contributes to the European Action Plan for the Prevention and Control of Non-communicable Diseases in the WHO European Region 2016–2025

A pilot project in one prison campus was instituted, where medical supervision and prescription of smoking cessation aids was supported by the nominated nurse prescriber.

This project was undertaken by the nurse supervisor of the Red Cross Peer educator programme. Their role was crucial to the success of the project and peer support group facilitators for weekly smoking cessation meetings.

Figure 22: Smoking Cessation Information

Prison populations are amongst hard-to-reach parts of the community. Seo suggest that peer support systems may serve as an entry point to the healthcare system [20].

Experience with the advocacy provided by Red Cross volunteer peers has encouraged inmates to connect with healthcare for the prescribed cessation aids. Interest in smoking cessation before the introduction of the current peer education programme, engagement with healthcare for smoking cessation assistance was uncommon.

Red Cross volunteer peers received training in the facilitation of smoking cessation support meetings. The weekly peer-support groups were facilitated as an adjunct to smoking cessation aids provided by healthcare. Evidence is indicating over twelve-week periods (Table 1) that there is an encouraging number sustaining the non-smoking behaviour. Following pilot projects, the programme has been extended to other prisons where there are Red Cross peer educators. The programme encourages both prisoners and staff to participate.

Table 1: Outcomes Of Peer-Supported Smoking Cessation Initiative in Three Prisons

Prisons	Prisoners Starting programme	Staff Starting the programme	Prisoners sustaining non-smoking	Staff sustaining non-smoking	Smoke Free landing s achieved
Closed Prison	18	7	10	5	East wing smoke free
Women's Prison	18	4	12	1	Elm House smoke free
Open Centre	12	0	5	0	Plans in place to identify a smoke free area.

However, both Seo et al and Yuan suggest that whilst systematic reviews conclude that peer support interventions such as these increase abstinence, further studies need to focus on longer periods and consider the smoking status of peers involved [3, 20].

Promoting Cancer Awareness

Skin cancer is quite common in Ireland and prison inmates tend to seek sunbathing in hot weather in prison yards, often ignorant to the risks of unprotected skin. Therefore, in partnership with Irish Cancer Society, a 'Sun Smart' campaign is promoted by inmate peer educators within the communities.

In collaboration with Prison Management, all prisoners have access to sunscreen through dispensers sited at yard entrances with Sun Smart posters. The role of inmate volunteer peer educators is to provide information and encourage the use of sunscreen.

Figure 23: Annual 'SunSmart' Red Cross Project on Preventing Skin Cancer

Figure 24: Focus on men's Health Week including cancer awareness

Promoting Physical Exercise for Healthy Hearts, Weight Watching and Mental Health

Volunteers set up a survey with the prison population to assess the level of participation in Gym activities. This was used in relation to identify ways of encouraging increased prisoner population use of the Gym facilities.

During the Covid Pandemic, during lockdown, projects were introduced through Red Cross newsletters to guide prisoners about how they could safely exercise within the confines of their cell.

In several prisons, Red Cross volunteers worked with the CHAC groups to implement walking campaigns in the prison grounds, marking out the distances that could be covered within the confines of the prison grounds. In some prisons, these activities were undertaken with staff participation.

Healthy Checks for Staff and Prisoners

To encourage a healthier prison community of both staff and prisoners, Health Check centres were set up around the prison to enable checks of blood pressure and pulse with the project identifying previously unknown cases of hypertension Braich.

Walking Exercise in the Women's Prison

Figure 25: Healthy Living in the Women's prison. Red Cross volunteer-led projects on promoting cardio-vascular workout, contributing to Healthy Living and social inclusion

Encouraging Good Nutrition

Inmate volunteers lead conversations about healthy eating & learned about the types of food and how they impact the various parts of the body. This information could then be shared with the wider prison community.

Health Aging in Prison Populations

WHO recognizes the increasing elderly population globally. Its approach to healthy aging supports meeting their needs, assist in learning and growing, maintain mobility, build and maintain relationships allowing them to contribute to society. There has been a significant increase of elderly persons in Irish Prisons over the last ten years, some due to the trying of historical crimes. In one Irish prison with significant elderly, younger Red Cross volunteer peer educators have instigated a number of projects. These have included arranging social events and opportunities for

accompanied walking. A volunteer-led meals on wheels service and home help project have aided those elderly with physical disability.

Volunteers operating means on wheels to inmates cells also note when inmates are not eating sufficiently and inform the healthcare nurse.

Dedicated Wellness Weeks

The Red Cross programme along with the school and prison services created a week of activities geared towards improving health and wellbeing of prisoners. These included a 5km walk, wellness art, Overdose Prevention, Smoking Cessation, and other activities.

Contributing to the UN Sustainable Development Goals

The CBH in Detention Programme contributes to a number of these goals. Health and wellbeing projects contribute to SDG 3 relating to Good Health; SDG 16 Peace and Justice through projects on health, wellbeing, violence, and conflict reduction.

Conclusion

This paper has attempted to describe an innovative approach to prison preventive health in which peer-educators linked to health systems has been crucial. In addition to presenting example of peer education activities for preventive health, the author has described at length some of the scientific background underpinning the process of the programme [49-55].

This has been provided as it has shown that a consideration of these principles in the field of communication and empowerment for longevity of a preventive health programme in prisons can be of benefit. It suggests new ways of thinking about curricular design and that both order and chaos can and perhaps should, coexist as a platform for change.

In addition, a recognition that human systems and their contexts, in which they exist are complex and the feedback systems of Complex Adaptive Systems may play a key role in navigating new and different ways of finding solutions.

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